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ABSTRACT

This volume contains the proceedings of a conference concerning the preparation of physical education teachers. Titles and authors of papers are: (1) "Action 2000: Preparing Physical Education Specialists for the Future" (M. Haberman); (2) "The Content of an Elementary School Physical Education Program and its Impact on Teacher Preparation" (K. R. Barrett); (3) "Teaching as a Rational Enterprise: A Problem of Neglect" (E. S. Bressan); (4) "Disciplinary Knowledge in Teacher Education Programs" (H. Lawson, D. Belka, and R. Simmons); (5) "The Great Teacher Education Legend" (D. Siedentop); (6) "Beyond Pedagogy" (M. A. Sanborn); (7) "Student Influence on Programs of Teacher Education" (N. F. Earls); (8) "Delusions of 'Worth-it-ness': Field Experiences in Elementary Physical Education Teacher Education Programs" (P. Dodds); (9) "The Process of Personal Professional Integration" (A. E. Jewett and M. R. Mullan); (10) "Developing Commitment to Teaching: The Professional Socialization of the Preservice Physical Educator" (T. J. Templin); (11) "The Hidden Curriculum in Teacher Education" (L. L. Bain); (12) "Commitment to Action: Looking at the Future through Rear View Mirrors" (G. Graham); (13) "From the Ozarks to Orlando: Now that We Understand the Question, What's the Answer?" (L. F. Locke); (14) "Employment Prospects for Elementary Physical Educators: An Assessment of Market Indicators" (L. E. Randall); (15) "Where Fools Tread: Planning for Affective Outcomes in a Methods Course" (J. F. Young); (16) "The Preparation of the Elementary School Physical Education Specialist: A Two-year Post-baccaluareate Program Model" (M. D. Luke); (17) "One from the Heart: A Minority Report" (S. Kleinman); (18) "Developing and Disseminating a Curriculum Model--Implications for Professional Preparation" (M. F. Owens); (19) "A Systematic Teacher Training Model--A Viable Component to the Teacher Training Program" (R. E.

McBride); (20) "Professional Issues for Elementary School Physical Educators in Developing Daily Physical Education Curriculums" (K. G. Hawkins); (21) "Professional Development in Elementary and Physical Education at Simon Fraser University" (E. Warrell); (22) "A Coordinated and Sequential Physical Education Teacher Preparation Program for Grades K-12" (S. E. Klesius); (23) "Teacher Certification Program at the University of South Carolina for Grades K-12" (P. Werner); (24) "Dual Certification Program Elementary Education--Elementary Physical Education" (E. Stafford); (25) "Appalachian State University--Elementary Concentration" (J. B. Carlson); and (26) "West Virginia University Teacher Certification Program for Grades K-12" (A. Hawkins) (CB)

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Physical Education Professional Preparation: Insights And Foresights

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Proceedings of The Second National Conference on Preparing The Physical Education Specialist for Children, October 20-23, 1984

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Proceedings from The Second National Conference
on Preparing The Physical Education Specialist
for Children,
October 20–23, 1984

Editors

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Second National Conference on Preparing The Physical Education Specialist for Children

October 20-23, 1984
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Preface

The American Alliance for Health, Physical Education, Recreation and Dance, or some unit of the Alliance, has sponsored several recent conferences on teacher education or professional preparation. It is not always clear how we use these terms, but that is a discussion for another time. Each conference (Lake of the Ozarks: 1972, New Orleans: 1973, and Chicago: 1980) contributed to our understanding of the state of the art in some way. What appeared on these conference programs was informative, but what did not appear was equally significant.

The Second National Conference on Preparing the Physical Education Specialist for Children, Orlando, Florida likewise will be remembered for what was included as well as what was not included. It was another attempt at a teacher education conference, and one that succeeded to the satisfaction of most conferees. The conference included some of the most current thinking on important issues in curriculum development in teacher education. Although the papers focus on preparing elementary school physical education specialists, they should be insightful for anyone interested in physical education teacher education.

In the conference summary delivered by Larry Locke, we were told there is reason to celebrate because we had just participated in the "first" teacher education conference. But don't get too comfortable. We were also told that this conference did not attend to the complete teacher education agenda that we should be addressing. If you want to find out what the conference did not do, go to the Locke summary.

Much of the success of the conference can be attributed to the establishment of a clear focus. After surveying 200 teacher education institutions, several open hearings at regional and national conferences, and soliciting comments on tentative plans, the planning committee made several critical decisions including limiting the conference to preservice curriculum development, not focusing on the content of an elementary school physical education program, and endeavoring to have each major presentation contribute to the overall design of the program. Additionally, calls for models of teacher education programs and for evening papers on related topics were carefully reviewed by the planning committee to ensure adherence with the conference goals. The scope of teacher education issues is too broad to be addressed in a single conference, and priority decisions had to be made. You can judge for yourself whether or not the committee succeeded.

Those who attended the conference will recall the passion and excitement of the conference and of the presentations. These written words will remind us of the important ideas expressed by the speakers which caused us to reflect on our own programs. To those not able to attend, we hope these papers will have some effect as you continue your work in teacher education.

In the opening article, Dean Martin Haberman makes 21 predictions for the future of teacher education and relates much of what is happening today to past events in our profession. Two major sections follow; one on the content of teacher education programs and the second on the process of teacher education. Several of the authors developed their papers in consultation with each other to avoid duplication. The result is a set of focused papers on several important issues.

The authors of the program models and Evening papers were invited to submit their work for inclusion in these proceedings. Unfortunately, space did not permit accepting all of them. Model presentors were limited to a specified format and limited amount of space. We encourage you to correspond with these authors for additional information about their programs, and we recommend the same for the other papers. Authors of papers not selected for this publication have been encouraged to submit their work for publication in other professional outlets. We are sure that most will appear in other places. The papers that were selected represent a variety of teacher education topics. Included are a philosophical position, a manpower study, a research report on a methods course, a conceptual teacher education program, a graduate program, a dissemination project used for inservice education, and a description of the daily physical education program in Australia. The selection represents the diversity of interests in teacher education and the expanding activity of our colleagues' scholarship.

Professors Graham and Locke help us understand where we've been, where we are, and where we should be going. We hope that you will feel a sense of direction and pride in the development of physical education teacher education. The authors of the major conference papers have given much of their time and energy. They accepted their assignments and carried them through to completion in a competent and scholarly manner. To them, we can never say "thank you" enough. To those who came to Orlando to study and share, we also owe a "thank you" for asking many of the important questions and helping the presentors know that their efforts were appreciated. And finally, "thanks" to Margie Hanson and COPEC for the vote of confidence in asking us to assume this assignment. The long hours of planning were worth the effort and we value the friendships we have nurtured.

Hubert A. Hoffman

Hubert A. Hoffman

Judith E. Rink

Judith E. Rink

KEYNOTE ADDRESS

Action 2000: Preparing Physical Education Specialists for The Future
(Summary)

Martin Haberman
University of Wisconsin, Milwaukee

Almost 1300 institutions of higher education prepare teachers. Given this diversity, almost any prediction may turn out to be true in at least a few institutions. Looking ahead to the year 2000, however, it is possible to make some generalizations based on trends that already are taking shape.

First, an increasing number of university-based teacher educators will become concerned about conditions in elementary and secondary schools. Their concern will go beyond finding better cooperating teachers. Teacher educators will be interested in the degree to which lower schools are implementing the research literature regarding effective teaching and effective schools. As we place future student teachers and interns, the unit of analysis will shift from the teacher level to the school level. In place of simply finding able cooperating teachers, institutions will be seeking total school environments that are conducive to learning. Colleges and universities will create partnerships with schools where their students can both feel like and learn to be professionals. Teacher educators will become increasingly concerned about improving the conditions under which teachers practice because these conditions shape the students' and interns' perceptions of the teaching role and function.

Second, laboratory schools will be rediscovered. These schools will take new forms. They will not be limited to faculty children or to the children of majority, professional families. These new laboratory schools will be part of public systems that have ethnically integrated students and faculties. Unlike the laboratory schools of the past, the rediscoveries will demonstrate special curricula and successful applications of research. The special curricula will be much like those offered by specialty schools which emphasize science, the arts, business, the helping professions, or other specific studies.

Third, a concomitant result of the new laboratory schools will appear in the nature of what is considered scholarly yet useful inquiry. Research will be designed by classroom teachers serving as equal partners with university faculty. This means that the questions selected for study will be more practical, and university masters and doctoral theses will become more directly applicable to school practice. The dual effect of the new laboratory schools will be to further specialize the school curricula offered for children and youth, and to make the nature of educational research more immediately useful to school practice by involving master teachers in the design of the research.

Fourth, school faculty will move toward greater equality and genuine partnerships with university faculty in designing teacher education programs. Decisions about such items as admission criteria, the nature of program competencies required for graduation, and licensure tests, formerly made by university faculty and state officials, will become shared decisions partially based on the assessments and views of classroom practitioners.

Fifth, there will be an increase in the number of states with professional practices acts. Statewide boards, comprised of a majority of classroom teachers, will set the standards by which teacher education programs offered by colleges and universities are approved. Teaching will become more like those professions in which the practitioner controls licensure of individuals *and* the accreditation of university programs.

Sixth, state legislators will markedly increase the number of state statutes specifically aimed at what future and practicing teachers must know and do. Such statutes will include laws that specifically require future teachers to speak Spanish, to be able to work in schools that mainstream the handicapped, and to be expert in the teaching of basic skills. In the past, such specific statutes emphasized the history of the particular state. In the future, specific statutes will exert greater control over the basic content of the entire teacher education program. In addition to the examples cited, there will be states that require basic concepts in ecology, the workings of the free enterprise system, women's studies, and numerous other topics favored by particularly effective constituencies. Many of these requirements will change the liberal studies requirements for teachers as much as they alter the professional education courses.

Seventh, the present demands for excellence in "A Nation at Risk" and in the numerous other reports will continue. Public schools will raise their general standards and add programs for the academically talented. In response, many teacher education programs, particularly those in the knowledge-producing universities, will also have their standards raised. Admission standards to teacher education programs also will be raised, and the quality of programs will be improved. The tests for licensure will also become more predictive of effective practice.

Almost as a counter trend, the eighth change is already taking shape. School dropouts will also be increasing as excellence is emphasized. In Wisconsin, for example, the number of those who receive high school diplomas by completing a G.E.D. exam is now almost 25 percent of the number who actually attend and graduate each year. Schools will have to do more with the number of students being "pushed out" as a result of the drive for excellence. Consequently, teacher education will also respond with more preparation of vocational teachers, of those capable of remedial instruction, and of those skilled in bilingual and compensatory education. The great diversity of teacher preparing institutions will permit the simultaneous response of new programs aimed at both excellence and access. Those public schools which retreat to more traditional curricula and those which broaden to serve youth in more diverse ways all will find some form of teacher education program to draw upon.

Ninth, the pattern of most teacher education programs will be reversed.

Rather than offering the coursework first and the direct experience last (i.e., student teaching for seniors), most programs will offer direct experiences from the very beginning and increasing amounts of courses after students have had experiences. Direct experiences with children and youth will become a part of the selection process in many programs. Students will be admitted *after* they demonstrate they can relate to children and youth.

Tenth, teacher education programs will become much more expensive for universities to offer. The increased expense will result from an increase in the number of direct experiences offered preservice students with children and youth and because the experiences will be more carefully guided observations than currently are typical. In place of simply sending students out and telling them they can learn from any teacher or situation, students will be prepared for observations, to dialogue carefully about what they think they have observed, and to assess what they think they have learned. We now recognize that unsupervised, uncontrolled observations may be not only uneducative, but actively miseducative.

Eleventh, universities will become more deeply involved with inservice, much more than simply sending a faculty member to offer an inservice credit course off campus. Universities will be required by law and by professional and public opinion to take responsibility for the success of the first-year teacher. This will be done by including public service to schools as part of faculty members' regular loads. Practicing teachers and schools will have some control over which faculty are utilized for inservice. In some ways, this trend will be a revitalization of the Teacher Center concept by which classroom teachers controlled their own development with some faculty input upon request. The new inservice dimension will add further costs to the university teacher education programs since no student credit hours will be generated directly by those faculty efforts.

Twelfth, concepts of adult education will become part of teacher education. Rather than treating future teachers as college youth, concepts of how adults learn will gain greater acceptance in teacher education programs. Such concepts include the preservice students' participation in setting course goals, utilization of the preservice students' backgrounds of experience, and individualization of the teacher education programs.

Thirteenth, an increasing number of teacher education programs will require five years to complete. Such programs will include a fifth year for liberal arts graduates and five-year programs for undergraduate education majors. The recognition that there is simply too much to learn in four years will gain increasing support.

Fourteenth, teacher education will become more of a university-wide function. Faculty in arts and science, engineering, business, and other schools will become more directly involved with schools. Part of this trend will result from increasing school-university partnerships, the drive for excellence; the specialization of high schools in special subject matter emphasis, and the greater recognition which universities will extend to all faculty who perform public service.

Fifteenth, at the same time as improvements are made in the quality of teacher education from the 14 trends already described, there will be an increase of untrained teachers simply dumped into classrooms with emergency licenses. This will be the inevitable result of population increases in the lower schools at the same time as colleges and universities begin to make serious efforts to improve their quality. Public officials will not close schools "simply" because they lack appropriately prepared teachers. They will keep such schools open with unlicensed or out-of-license practitioners. It is ironic that teacher education will be making the greatest improvements in its history at the very same time that the demands for new teachers will increase: the net result will be significantly more, not fewer, unprepared teachers. The alternative, that universities will markedly increase funding for schools of education so that they can improve and expand the number of more able graduates is highly unlikely to occur. Every state will see an increase of higher quality university-prepared teachers at the very same time as it utilizes more unlicensed teachers.

Sixteenth, the prognosis for increased support for research and development in teacher education is not promising. The public—and their legislators—simply expect more research from college professors than faculty are capable of, and this refers specifically to the knowledge-generating institutions. Faculty assume they cannot conduct research or develop teacher education without external support: outsiders who control a university's budget, however, see a one- or two-course faculty load as already having built-in state support for research or writing. In addition, the public has developed higher priorities than education (i.e., defense, jobs, health, restoring the infrastructure, and entitlement programs) and expects improved education (and teacher education) to be paid for with existing budgets. These perception problems are endemic to research in education and will not be changed substantially by changing the pattern of Democratic or Republican elected officials.

Seventeenth, there will be a continuing increase in the number of faculty having little or no teaching experience who teach in university preservice programs. The increasing specialization of doctoral programs in education will train new assistant professors for narrow niches on faculties and will not place a very high premium on classroom experience. University demands for scholarly publication will continue to control the selection process for new faculty.

Eighteenth, there will be an increase of minorities and women in leadership positions in teacher education. The increase will cause significant change in many universities in the way schools of education relate to the public schools, to other schools and colleges within a university, and to state departments of education. There will be less change in minority representation on school of education faculty because a dean must be a generalist, and a minority person or a woman can be found with the leadership abilities required of a dean. New faculty members, however, will be hired for specialized roles and minorities will be harder to recruit for these lower status and lower paying positions. An anomaly will be created between increased minority group members in leadership roles and the lower number in faculty roles.

Nineteenth, the organized profession (i.e., NEA and AFT) will become increasingly involved in teacher education. This involvement will include offering programs in whole or in part by organized groups of teachers. The increased number of emergency licensees will cause the profession to seek new ways not only of controlling admission to practice, but of trying to provide real help (i.e., on-the-job, in schools) to beginners.

Twentieth, there will be an almost total blurring of what is preservice and what is inservice and of what is the responsibility of the university and what is the responsibility of the public school. Since student teachers, interns, first-year teachers, and emergency appointees will all need the help and supervision of some practicing teachers, the traditional (and arbitrary) distinctions between preservice and inservice will be further muddied. Genuine working partnerships between schools and universities will serve to further confound this distinction. As the preparation of beginners is connected to career ladders, it will be more difficult to pinpoint university accountability for teacher effectiveness as separate from public school responsibility.

Twenty-first, there will be a resurrection of city-run normal schools. The major urban areas simply will be faced with too great a need and too few graduates of regular university-based teacher education programs. These normal schools will be aimed at college graduates with no teacher preparation and will be under the aegis of metropolitan or great city public school districts. They will not be called normal schools, but will seek some form of state or regional accreditation as graduate schools of education. The organized profession will control the curricula; university faculty will be involved only as individual consultants.

The net effect of these twenty-one and other trends occurring simultaneously will be an acceleration of the present state of diversity. Teacher education programs will become more state and local, not more national, as many of the current critics contend. The range of quality from inadequate to superlative will be stretched further. The potential for and shaping of change will make the next decades a most exciting time in the development of American teacher education.

SECTION ONE
The Content of The Professional Preparation Program for Preparing Elementary School Physical Education Specialists

The first full day of the conference was devoted to defining the role of major *content* areas in the teacher preparation curriculum. Selected major content areas were: the content of the elementary school physical education program, the foundations, the disciplines, pedagogy, and job skills. Speakers were asked to clarify issues and to help conference participants to make rational decisions relative to the contribution of the content area to the preparation of the elementary physical education specialist.

The Content of An Elementary School Physical Education Program And Its Impact on Teacher Preparation

Kate R. Barrett

The University of North Carolina—Greensboro
Greensboro, NC

The content of our field symbolizes what we stand for and what we have to offer the education of children. Our graduates will have to make decisions about what children will experience, in what sequence, and about how skillful they want children to become. These are tough decisions; never before in our history have we had so many directions from which to choose. For example, we can choose among:

Adventure
Aerobic exercise
Aerobic dance
American country dance
Basic movement
Basketball
Basketball basics
Bean bags
Sticks and wands
Beginning ball skills
Breaking up space sensibly
Challenging climbing capacities
Creative dance
Creative movement
Creative dramatics
Educational dance
Educational games
Educational gymnastics
Eyes and fingers in motion
Fitness trails
Folk dance for fun
Football fantastics
Fun with ropes
Hoopnastics
Huckleberry beanstalk
Modern educational dance
Movement/dance
Movement/gymnastics
Movement/games
Parachute play
Partner gymnastics
Rhythmic movement for fun
  and fitness
Rope courses
Rope jumping
Simple soccer skills
Sittercises
Softball strategies
Sticks, paddles and things
Tinkling for fun and fitness
Tennis tactics
Ultimate frisbee
Volleyball requisite skills
Working in your on target zone

Research for specific sections of this paper was supported by a grant from the University of North Carolina–Greensboro.

How do you react to this list? My reaction is that any profession which defines its content to include so great a range needs to reevaluate its purpose for being and, ultimately, its justification as a required subject in a child's curriculum. For some reason we have become hesitant, perhaps reluctant, to think critically about our content. Instead, we adopt the "in" terminology or the "going thing," without understanding what it really means, where it came from, and most important, where it could lead us. It is time to accept the fact that our content has become too diverse to give us the direction needed to design programs that could be considered essential to a child's elementary school education, and one effect has been the weakening of our teacher preparation programs.

The purpose of this presentation is to address the topic of elementary school physical education content and its impact on teacher preparation. The impact is obvious, whatever you believe the content of physical education for children to be is the central idea around which you design teacher preparation experiences. What is not so obvious, is how to decide what should be the content. With the diversity so apparent, how do you make this decision? My answer to this question will center around three suggestions: (a) recognize *movement* as physical education content rather than a term used to designate a curriculum area or group of experiences; (b) accept the development and performance of skillful movement as the primary purpose around which curriculum should be designed; and (c) make content decisions based upon a comprehensive movement analysis.

THE CONTENT OF ELEMENTARY SCHOOL PHYSICAL EDUCATION

Movement As Content, Not As A Curriculum Area

It seems time to accept the use of the term *movement* to describe the content of elementary school physical education and eliminate its use as a term to designate a particular area of the curriculum. This means that the historically accepted terms of *games* or *sports, dance, gymnastics, aquatics,* and *fitness* or *exercise* would be used specifically to describe the major organization of the program not to imply any specific content or methodology. You would not list or give a percentage of time to something called *movement* or *movement activities,* you would not have *movement lessons,* rather you would have *games lessons, dance lessons, gymnastics lessons,* or *aquatics lessons.*

Viewing movement as the content, thereby cutting across all areas of the curriculum, is going to be difficult since this is not the predominant view held by our profession. Support for this position comes from reviewing elementary school physical education textbooks from 1900 to the present and recent curriculum literature related to describing and analyzing program models and approaches. Based on this review, my conclusion is that movement is the subject matter of our field even though many authors do not specifically identify it as such (i.e., they do not use the word *movement*). While much of what was described as content was termed *activities* or *exercises,* all required learning and performing motor skills to meet their purpose. While the word *movement* was not used by authors to describe content, it was a term freely used at the turn of the century by some of our authors (e.g., Bancroft, 1896 and Halsey and Skarstrom, 1919).

This view is also meant to replace any terms that have been assigned to describe a particular approach to a program (Siedentop, Herkowitz, and Rink, 1984) or a particular curriculum model (Jewett and Bain, 1985). Siedentop, Herkowitz, and Rink (1984) identified five approaches to elementary school physical education curriculum design: eclectic, movement approach, sports, recreation, and fitness; and Bain and Jewett (in press) identified seven physical education curriculum models: developmental education, humanistic physical education, fitness, movement education, kinesiological studies, play education, and personal meaning.

In these models and approaches, the authors appeared to interpret movement as content only in the movement approach, the movement education model, and in the kinesiological studies model. Studying specifically what is described as the content in each of the seven models and five approaches indicated again that the learning and performance of motor skills was an inherent and central dimension of each. Not recognizing movement as the actual content is puzzling and could restrict the growth of any model or approach, certainly where the content dimension is concerned. What is not made clear either in the textbooks or in the models and approaches, and which may be the (hidden) critical difference, is the level of motor skill development sought as an outcome. What is clear, is that movement or motor skill learning is the basis of all program experiences. What gives each approach or model distinction and potential for choosing it, are the assumptions upon which each is based and for what purpose(s) movement is used, not whether the content is identified as movement or as activities.

If you can accept movement as content, and you understand how it is structured for the unique demands of games and sports, dance, gymnastics, aquatics, and fitness, this perspective will allow you much freedom in making decisions about content in relation to an actual program. Diversity will exist, but its range will be controlled by a common commitment to understanding movement and how this understanding acts as the foundation upon which content is ultimately identified and sequenced to form a total program.

Commitment To Skillful Movement

I think it is critical that we accept the development and performance of skillful movement as the primary goal around which an elementary school physical education program should be designed. Why? Who else has the knowledge and skills to truly accomplish this, and who best understands the value of physical activity? I do acknowledge, that this is a debatable issue and one I hope will be addressed throughout the conference as appropriate. Without taking a position on this issue, teacher preparation experiences will be designed in a vacuum. For the duration of this presentation, I am going to ask that you support the position that development and performance of skillful movement is the central purpose of children's physical education.

This position accepts that children have potential for skillful movement, that they want to become as skillful as they can, and that it is our responsibility to help them accomplish skillful movement. By using the term *skillful movement* or *skillful mover* it should not be interpreted that I support an "elite-skilled-performance orientation" (Phillips and Clark, 1984) because I see that as totally inappropriate for an elementary school physical education program. Being able to help *all* children refine and extend their present skill level, however, is a responsibility we must accept. Furthermore, my emphasis on skillful movement should not be construed as a lack of commitment to cognitive and affective learnings. Indeed, quite the opposite, I believe movement, affective, and cognitive learnings to be an integrated experience, but I see the development of skillful movement to be the medium through which this occurs. For example, it is difficult for children to get excited about the feel of a movement or why it was effective or ineffective, if they are not skilled enough to feel the excitement or skilled enough to become curious about why the movement was or was not effective.

For the next section of my paper, I shall be referring to games, dance, gymnastics, and aquatics as the broad areas of the curriculum, eliminating the terms *sports* and *fitness*. I am using games in the broad sense and, as yet, I do not accept fitness as a separate curriculum area, but rather as a desired outcome influenced by the way the actual class experiences are designed. Fitness is an important component of the total program; about that I have no question. But, how to handle fitness realistically, coupled with a commitment to skillful movement, is still a question research has not asked.

Movement Analysis

To make actual decisions about what to teach, all teachers should have an approach to analyzing movement that is comprehensive in nature, one they understand, and one they can apply to all areas of the curriculum. Being comprehensive helps teachers see "the whole thing" of what they are teaching and sense what their field is about. Understanding their field gives teachers the rationale for making decisions about what to teach and why. Applying it to all areas of the curriculum gives the program unity, continuity, and breadth. The two models that follow have been selected because they are implicitly or explicitly a part of our current literature, in part or in their entirety. They are not new; rather, they are underdeveloped. Figure 1 illustrates Model A and Figure 2 illustrates Model B.

Model A had its beginnings in 1924 and is closely associated with the history of American kinesiology and motor development (Atwater, 1980; Barrett, 1983, 1984). Model B had its beginnings around 1940 and is associated primarily with the history of dance in England (Laban, 1963). Both models were originally conceived and designed specifically to help teachers organize and select material for teaching and to give guidance and focus to their work. Model A was developed originally for the specialized skills of daily life, work, sports, and dance (M. R. Broer, personal communication, May 31, 1984; National Association for Physical Education of College Women, 1964) and Model B was developed for modern educational dance (Laban, 1948, 1963; Preston-Dunlop, 1963, 1980). Both models offer sound ways to analyze movement for teaching today, and when understood can be applied to the selection and organization of content necessary to develop skillful movement in games, dance, gymnastics, and aquatics. More importantly, they respect different view points about how movement might be analyzed.

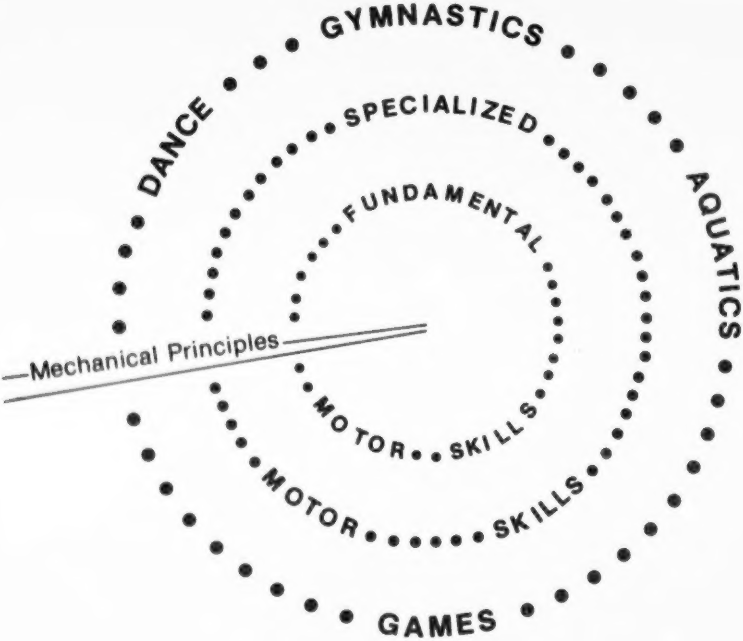
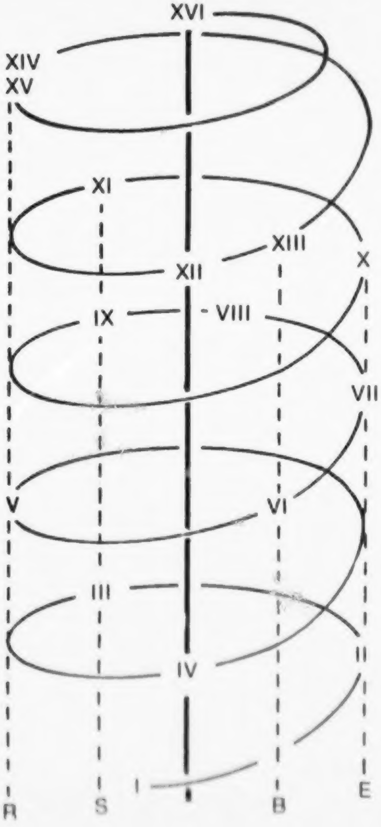


Figure 1. Model A. Used for analyzing movement from a skill perspective (Broer and Zernicke, 1979; Halverson, 1967; National Association for Physical Education of College Women, 1964; Wickstrom, 1983)

Model A. Model A analyzes movement from a skill perspective. It supports the position that specific motor skills can be identified and organized in a hierarchical manner and are of two types: fundamental (basic) and specialized (Broer and Zernicke, 1979; Halverson, 1967; National Association for Physical Education of College Women, 1964; Wickstrom, 1983). This model recognizes that fundamental and specialized motor skills can be identified in all areas of the curriculum and that specialized motor skills are dependent upon the development of fundamental motor skills if they are to be applied effectively to the more advanced environments. The model makes specific the important and integrated role that mechanical principles play throughout the entire process; they must be observed for efficiency at both levels (M. R. Broer, personal communication, May 31, 1984). Implicit in this model is a belief that all movement skills are not unique in that certain basic movement patterns exist. This is explained by Broer and Zernicke (1979):

> As various skills are analyzed from the standpoint of the mechanics involved, it becomes obvious that there are some basic patterns of movement that require only slight adjustments according to the various purposes. (p. 8)



Spiral Development of the Sixteen Themes

Figure 2. Model B. Used for analyzing movement from a conceptual perspective (Preston-Dunlop, 1980)

They further state:

> There is not one basic pattern of movement for any activity; there is a pattern for maximum force production and this is adjusted as less force is required to accomplish the specific purpose .... Good form is not a set pattern but rather the movement, or movements, which accomplish the purpose with the least expenditure of energy. (p. 29)

Understanding these concepts is important in using Model A because they aid you in organizing and teaching content. They alert you to look for the relationships between different movements of the body, across and within different movement forms and to teach them.

Using any model, you must be able to apply the meaning of the terms associated with it. That of course takes study and would influence specific experiences designed as part of your teacher preparation curriculum. The following sections describe how I am currently defining these terms.

1. *Fundamental (basic) motor skills*—common motor activities with specific patterns. They are general skills that form the bases or foundations for the more advanced and more specific motor skills, as they may be required to be used in games, dance, gymnastics, and aquatics. Examples include running, jumping, throwing, catching, and twisting (National Association for Physical Education of College Women, 1964; Wickstrom, 1983).
2. *Specialized skills*—advanced and refined version of a fundamental motor skill that is used in a particular way in a particular situation in either games, dance, gymnastics, or aquatics (Wickstrom, 1977; 1983) and learned for the development of increased ability in the use of time/space/force relationships (H'Doubler, 1960, 1962). This implies modification or the combinations of fundamental motor skills (and changes in time/space/force relationships) essential for attaining specific goals for particular purposes (Halverson, 1967; National Association for Physical Education of College Women, 1964).
3. *Mechanical principles*—application of mechanical principles that apply to effective performance of fundamental and specific motor skills. This term is not meant to imply any specific set of tasks or content rather, the continued use of the information as a knowledge base upon which the teacher observes, interprets what is seen, and then makes decisions about how to continue (National Association for Physical Education of College Women, 1964; Roberton and Halverson, 1984).

For those of you who are unfamiliar with the history of Model A, the elimination of the "basic movement" component and the updating of the definitions are the major changes. Removing "basic movement" was done purposely because I question whether it is a useful concept when applied to analyzing movement for teaching children. It should be noted that the original model was designed to teach a fundamentals of movement course to college women (R. B. Glassow, personal communication, July 17, 1984). Basic movement is a concept we have used for approximately 30 years, and I feel it is misunderstood, misused, or inappropriate when applied to elementary school physical education. To me, it has become counterproductive to progress. I abandoned it approximately 10 years.

My decision to eliminate the term *basic movement* was influenced by reviewing the literature and the history of this particular model (Barrett, 1983, 1984), and especially by my recent correspondence with Marion Broer, its originator. The basic idea, she wrote, was "to recognize that there were Basic Movements available to the body, flexion, extension, rotation, circumduction, adduction, and abduction, that were the foundation or tool upon which various fundamental motor patterns could be developed" (M. R. Broer, personal communication, May 31, 1984). Today, this interpretation in elementary school physical education textbooks cannot be found; basic movement has become a fairly large collection of material, some of which, by my current definitions, would be considered fundamental motor skills and some specialized skills. No apparent rationale for sequencing it or for its relationship to skill development is evident. It seems to be assumed that by participating in experiences designed with basic movement as their content, a child would be better prepared for the more complex skills required by advanced work in games, dance, gymnastics, and aquatics. This assumption relates to the concept of transfer, though not specifically stated as such. To avoid this debatable assumption being carried into the modified model, I am suggesting that a separate analysis be made for each curriculum area so that right from the start a direction in terms of movement form is established. Analysis would begin with what you consider to be fundamental skills and specialized skills *for* games, gymnastics, dance, and aquatics—separately. When this task is completed you have the beginnings of a program. The model actually would be used four times and requires that you are knowledgeable about the movement or motor skills inherent in each area. This type of analysis has the potential to improve the way content is identified and sequenced for each area—it should be clearer (a) where we are heading, (b) why we are going there, and (c) what it is we want children to experience. The quality of our content should improve as we begin to understand the richness in each area. As we come to understand our content better, the relationships that do exist among skills and across movement forms will emerge.

Model A has been presented first because it is the one we use the most, knowingly or unknowingly, but with a certain lack of sophistication. The problem rests with recognizing that for the development of specialized skills we must create content so the modifications and refinement necessary for a fundamental skill to become a specialized skill can occur. We have not done this. For example, it is still assumed in today's approaches to games teaching in elementary school texts that fundamental skills will become specialized skills simply by using them in the context of the game in question. In 1937, Dorothy La Salle recognized the need for special experiences designed especially to handle this problem. She designed a system for analyzing skills found in games (La Salle, 1937, pp. 122-127) and showed "how games increase in difficulty by the addition of skills" (p. 120). In his 1951 book *Psychology of Coaching*, Lawther wrote of a skill having "meaning" in a sport. For example, about baseball he wrote, "each throw has a specific nature in terms of the game situation" (p. 122). In terms of coaching sports, he suggested that the "content" in courses should include "the basic skills, the fusion of the skills into action patterns, and the fusion of the action patterns into offensive and defensive play" (p. 128).

To create this content, it requires analyzing *how* the fundamental skill must be "modified" and "refined" so they can be used effectively in increasingly complex environments—in games, dance, gymnastics, and aquatics. This is done by analyzing the environment and the time/space/force (H'Doubler, 1960, 1962) demands that these environments have on the fundamental skills. It is not within the scope of this paper to go into an explanation of time/space/force relationships, except to say that these concepts were a part of the original 1964 model (National Association for Physical Education of College Women, 1964) and were linked directly with H'Doubler's work (1960, 1962). Figure 3 shows the particular aspect of her model that was applied.

Library research and a personal interview with a student of H'Doubler's and a recent student of "Laban's Movement Analysis" (Bartenieff, 1980) revealed that there are many similarities between these works, but the differences that do exist are important to understand (Barrett, 1983, 1984; M. A. Brennan, personal communication, July 18, 1984).

	SPACE - TIME (A FOUR DIMENSIONAL CONTINUUM UNITING THE THREE ELEMENTS OF SPACE (LENGTH, HEIGHT, WIDTH) AND ONE OF TIME)																									
	SPACE (AN EXPANSE EXTENDING IN ALL DIRECTIONS, THE BODY EXISTS IN SPACE AND MOVES THRU SPACE																**TIME** (INFINITE DURATION MOVEMENTS TAKE PLACE IN TIME)				**FORCE** (WHEN MUSCLE ENERGY IS RELEASED MOVEMENTS ARE PRODUCED HAVING VARYING DEGREES OF FORCE)					
	DIRECTION (PATH TAKEN)			**BODY FACINGS**				**LEVELS** (RAISED OR LOWERED CENTER OF GRAVITY)			**RANGE** (DISTANCE COVERED)			**FOCUS** (A POINT OF CONCENTRATION)			**SPEED** (RATE AT WHICH MOVEMENT INTERVALS PROCEED)			**INTERVAL DURATION** (THE RELATIVE TIME LENGTH OF SUCCESSIVE MOVEMENT INTERVALS EXPRESSED IN LONGS & SHORTS)	**MAGNITUDE** (AMOUNT OF FORCE)			**DIRECTION** (LINE OF FORCE)		
ACTIVITY	STRAIGHT	CURVED	ZIG-ZAG	FORWARD	BACKWARD	SIDEWARD	TURNING	HIGH	MEDIUM	LOW	SMALL	MEDIUM	LARGE	INWARD	OUTWARD	COMBINATION	SLOW	MODERATE	FAST		SMALL	MODERATE	GREAT	VERTICAL	DIAGONAL	HORIZONTAL

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Figure 3. A guide for the analysis of movement—dynamic considerations (H'Doubler, 1950)

My point is, that while Model A is the oldest of the two being presented, it may be the least developed in terms of its use for children's physical education although it has the potential to be the most powerful. It certainly warrants renewed attention. As you work with this model, you will come to realize that it draws explicitly from motor learning and motor development as additional bodies of important knowledge, both of which have advanced considerably since 1964. For example, task analysis helps you to analyze the way a fundamental skill is to be used in a particular situation, and hence "discover" important content. Knowledge of how fundamental motor skills develop over time gives a powerful observation and assessment tool to evaluate children's progress. How to use this information to design experiences for children that will elicit the desired responses is pedagogy, and another subject altogether.

Model B. Model B analyzes movement from a conceptual perspective. The term *concept* is used to connote a motor or movement outcome, not a cognitive one, and is interpreted to mean a group of skills organized around a common idea. Such concepts would include "traveling" as opposed to a specific type of travel, "catching" as opposed to a specific type of catch, or "balancing" as opposed to a specific type of balance. Model B supports the position that movement can be analyzed conceptually and that an order of these concepts exists that indicates how skill in movement develops over time. This attention to progression is operationalized by ordering all movement concepts into what originally was called 16 Basic Movement Themes and was first published in this form in 1948 by Rudolf Laban. The model, in reality Preston-Dunlop's interpretation of the relationship between and among the material within the themes, was first published in 1963 and revised in 1980. Notice that each theme, designated by the Roman numerals I–XVI, has a specific place along the spiral. The rationale behind the themes can best be explained by quoting Laban's original writings:

> The leading idea is that the teacher should find his own manner of stimulating his pupils to move, and later to dance, by choosing from a collection of basic movement-themes those variations which are appropriate to the actual stage and state of development of a pupil or of the majority of a class. The collection is built up along a scale of increasing complexity corresponding roughly to the development of the child from the infant stage to the highest age-group. (Laban, 1963, p. 28)

On the specific subject of how the first eight themes might actually be used, he pointed out:

> Each basic movement-theme or their variations can be combined with each other; others may be joined with one another through transmutations of their details. The movement ideas contained in one theme need not be fully assimilated by the pupil before another theme is started. Movement ideas can develop parallel to each other, and some teachers might find in relatively advanced themes details which they may use as an incentive in comparatively early stages of dance tuition. On the other hand, the most elementary movement themes will remain valuable even for the highest age-groups. (Laban, 1963, p. 28)

To use this model, the material in the themes must be understood before the application process begins. It is beyond the scope of this paper to go into detail regarding the material inherent in each theme since the brevity of the discus-

Theme I	Introduction to the body
Theme II	Introduction to weight and time
Theme III	Introduction to space
Theme IV	The flow of the weight of the body in space and time
Theme V	Adaptation to a partner
Theme VI	The instrumental use of the body and technique
Theme VII	Dynamics through the basic effort actions
Theme VIII	Occupational rhythms
Theme IX	Shape in movement
Theme X	Dynamic rhythms and effort transitions
Theme XI	Orientation in space
Theme XII	Body, action, effort and space affinities
Theme XIII	Elevation
Theme XIV	Group feeling and group composition
Theme XV	Group formations
Theme XVI	Meaning, expression, communication and embodiment

Table 1. The Sixteen Basic Movement Themes
(Preston-Dunlop, 1980)

sion would only undermine its richness. A discussion of the material inherent in one theme is given as an example of how the material is described and how progression is perceived as an integrated idea. Table 1 gives the major emphasis of the 16 Basic Movement Themes as currently revised by Preston-Dunlop (1980). I have chosen to discuss Theme IV: The Flow of the Weight of the Body in Space and Time.

Flow, as described by Preston-Dunlop (1980, pp. 26–30) is perceived as having "three strands," and the simplest strand is continuity, or "the way movements follow each other." In her words:

> If the movement is continuous, without starts and stops, it has continuity and is loosely said to be flowing on. If the movements stop and start, the sequence is discontinuous. It is said not to be flowing on, but to be interrupted. (Preston-Dunlop, 1980, p. 26)

The second strand, she points out, is concerned with "the way the movement flows through the body." In her words:

> It flows successively through the body if the activity can be seen and felt to pass from one body part to another adjacent part in succession. It flows simultaneously through-

> out the body if the activity can be seen and felt to happen in all the moving body parts at the same time. (Preston-Dunlop, 1980, p. 26)

The third strand, free and bound flow, is concerned with "the way in which the movement is controlled or not controlled" (Preston-Dunlop, 1980, p. 28). Quoting Laban directly in her explanation:

> In an action in which it is difficult to stop the movement suddenly, the flow is free or fluent. In an action capable of being stopped and held without difficulty at any moment during the movement, the flow is bound. (Laban, 1963, p. 56)

Flexible and direct space qualities are discussed in detail followed by the four motion factors as continuums and the two-motion-factor qualities. In these discussions, it is clear that she is bringing forth material that was a part of earlier themes, particularly Theme II. She concludes her discussion by indicating that, while there is new material in this theme, its main aim is "to integrate the work of the preceeding three" (Preston-Dunlop, 1980, p. 37). This is done by attending to the phrasing of the movement combinations as they are joined together in terms of "transitions, appropriateness, beginnings, and endings" (Preston-Dunlop, 1980, p. 39).

Model B can be used to analyze the movement demands inherent in games, dance, gymnastics, and aquatics and to organize it progressively since the material inherent in the earlier themes is considered less complex than the material in the later ones. When this task is complete, you have the beginnings of a program. Skillful movement as a commitment is explictly a part of this model. The theory of movement around which this model is built is the concept of "economy of movement" (Laban and Lawrence, 1974) and is its very essence. Identifying and sequencing movement analyzed using this model assumes a commitment to the goal of skillful movement, evident by the spiral concept and the sophisticated theory of progression inherent within the model.

Analyzing movement using this model should improve the way content is identified and sequenced for each of the major curriculum areas. Where we are heading, why we want to go there, and what is it we want children to experience, should all become clearer to us. Model B supports the belief that relationships exist between movement concepts and across and between movement forms. These emerge, however, only as you come to understand movement analyzed from this perspective.

This model was presented second because it is the one least aligned with the way movement is currently being analyzed in the profession. While there are some attempts to use parts of this model, the model with the spiral concept of progression as presented here, has had limited use. This could be due, in part, to the fact that each generation using it has had less and less understanding of its meaning, or because it was originally used with too limited an understanding or too broad an application too early. There is still a lot of work that can be done to release the potential in this model for identifying and sequencing content to form a total program. Again, how to use the model in designing experiences and to elicit the desired responses, is pedagogy.

Separating Pedagogy and Content. Notice that I have ended the sections describing each model with the concept that pedagogy is an idea separate from content. If we are to become more sophisticated in the way we view our content, there is no question that this must occur. Admittedly, content and pedagogy are related ideas, but the role each plays in designing and implementing quality experiences for children is significant enough for each to be studied separately. This may be difficult, for we have viewed them together since the early 1900s when elementary school physical education textbooks were first published: certain content implied certain methodology (Halsey and Skarstrom, 1919; State of Michigan, 1919; Wild and White, 1924). As we now have accepted pedagogy as an area for study and research, it seems the time to separate them. In fact, this step could be a key factor, if not the key factor, in helping to untangle the question of content, because they are often perceived in much of our literature as inseparable. The most consistent example of this is the linking together of Laban's principles of movement with problem-solving methodology. If we want to advance our thinking about content, and pedagogy, content must be perceived as having its own identity.

IMPACT ON TEACHER PREPARATION CURRICULUM

Once a commitment has been made to the content of an elementary school physical education program, what are the implications for teacher preparation? Because the rest of this morning's speakers are focusing directly on this subject, my comments are limited to those implications which I feel relate specifically to movement as the content of an elementary school physical education program and skillful movement as its primary emphasis. My comments purposely are narrow in scope.

First, there is no question that our students must be turned on to their subject matter. In 1972, Locke said this well in his closing address at the first National Conference on Professional Preparation of the Elementary Specialist:

> ...Many students graduate who really care very little about their experiences in movement. They never have placed much value on those experiences and certainly have never thought deeply about them. Teachers like that can become contributers to the endemic disease of physical education—dullness.
>
> An exciting teacher in any subject is one who is turned on by his sport.... In physical education there is no substitute for getting pleasure from movement, satisfaction from mastery, and excitement from the struggle....
>
> If your graduates are going to get children high on sport and dance, they must be hooked on movement themselves. The corollary of the fact for both teacher education programs and teacher educators is too obvious to miss. The meaning and joy of effort in movement must be held at the center of professional life. (p. 99)

What Locke said in 1972 is as true today as it was then, with possibly one exception—the genuine excitement that some of our students get from running and working out. But as a physical educator responsible for educating children into a potential field of life-long learning and participation, this seems too limited. As one of our teaching assistants recently put it when asked to express her perceptions of our students in her basketball class: "they have no attitude about movement or learning movement. I don't think they know why they're here."

In terms of the professional preparation program, learning experiences must be developed specifically to help students enjoy moving, no matter the form. Children love to move, and love to learn how to move. My worry is that our graduates could turn children off rather than capture their natural love and talent for moving. As teacher educators, we must make this a priority objective within our programs, with learning experiences and evaluation techniques specifically designed to meet it. I see the "activity" part of our program as the major means to accomplish this. To be of value, however, the course work, or the activity experiences in this case, must link directly with the view you take regarding the content of a program. I am referring of course, to Model A and Model B.

Second, we must establish a focus on the importance of studying movement as it is needed for teaching children in physical education environments. There is little question that within the past decade the knowledge base in such areas as motor learning, motor development, kinesiology, biomechanics, and physiology has dramatically increased to the point where some serious reconceptualization of this knowledge for teacher preparation must occur. Phillips and Clark (1984) have addressed this problem as it relates to kinesiology and have proposed "an integrative approach to teaching kinesiology: a lifespan approach" (p. 1).

One thing is certain, the course work that specifically relates to understanding movement and how children acquire skill must link directly with the view you take regarding the content of a program. This is not the case now, and it needs to be resolved. For example, when your students study the content of an elementary school physical education program, they must be able to draw on their kinesiology background, not wonder why they took the course. This example, while specific to kinesiology, is also true for all course experiences in which understanding movement and how children acquire skill are key emphases. If movement is truly our content, surely we should be able to make the link between course work that focuses on understanding it and course work that focuses on teaching or using it as the basis for program development.

Whether your content orientation reflects Model A or Model B, a sound knowledge base about movement for teaching is required. While there is some common knowledge about movement and how skill is acquired, which is needed to use both models effectively, the knowledge unique to each model must be identified, respected, studied, and applied. For example, in using Model A, faculty must accept and understand the concept of basic movement patterns and the role that maximum force production and purpose of the movement plays in their execution. Faculty must also be able to analyze the time/space/force demands of the environment to help make the transition of a fundamental skill into a specific skill in games, dance, gymnastics, and aquatics. In using Model B, faculty must be knowledgeable about Laban's principles of movement and how progression affects development of skillful movement when applying them in games, dance, gymnastics, and aquatics.

Third, experiences specifically related to teaching physical education must be designed to link concepts of skill development and knowledge of movement with specific teaching behaviors. This is a complex idea considering these behaviors must simultaneously reflect an understanding of movement associated with the model chosen for analysis and skill development. Regardless of the model used, graduates must be able to manipulate specific teaching behaviors related to eliciting skillful movement from children in realistic environments. This can only occur if their work in pedagogy is placed on a strong foundation of understanding movement and of the process children go through to become skillful at using it. To achieve this goal, a carefully orchestrated balance between movement knowledge and methodology must be found while simultaneously focusing on the development of skillful observation of movement and on the timing and design of quality field experiences.

Accepting movement as the content and development and performance of skillful movement as a major outcome requires that a significant part of teacher preparation focus on understanding movement and how children acquire skill at using it. It goes without saying that children must play an important and continuous role throughout the preparation process. For without observing children being taught by skillful teachers in programs consistent with your decision about content, or without having your students work continuously with children, there is no way the kind of program that must happen in the schools has a chance of developing. And, because we will always have important issues to discuss about the content of physical education and its central purpose for children, our students must make "philosophy their business," for their ability to think critically about these issues will influence the future of the field (Miller, 1984).

We are at a turning point in our history: a clear decision about what is the content of elementary school physical education must be made. As a profession, we are currently uneasy about this decision, at least as it is being expressed in our literature. I feel it is time to acknowledge that movement is our content and limit the use of the term solely to describe the subject matter of our field—just as kinesiologists, motor learners, motor developers, physiologists, and philosophers do. If we can accept this concept, it can become a focus to orient us in a common direction.

It goes without saying that none of what I have said today is applicable if we do not think movement is our content or that skillful use of it is our central goal for children. If our content is something other than movement, and we want something other than skillful movement, this concept must be decided on before teacher preparation programs can be designed. Identifying our content and the central purpose of our program are decisions that should have the greatest impact on teacher preparation.

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Teaching As A Rational Enterprise; A Problem of Neglect

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E. C. Davis used to admonish his students to avoid premature closure during the question formulation phase of their theses. Search, he would advise, for those those "neglected questions" about your subject that heretofore have been unasked, for it is within the reconceptualization of problems that the promise of real progress in understanding lies buried. Any question about the value of the study of history and philosophy in the professional preparation of children's physical education specialists is in danger of the kind of premature closure about which Davis cautioned. Such a question could be too limited in focus, tied to the narrow parameters for content and methodology established by two of the oldest academic disciplines—history and philosophy. Such a question could impose second-class status on professional preparation, placing it on the receiving end of "something" from bodies of knowledge never organized or refined with human moving as a concern. In all candor, it could be conceived as a small confusing question that would hold out little hope for any new or inspiring insights.

So where is the neglected question, that conceptualization that may lead to a thoughtful and productive regard for the relationship between the kinds of activities typically associated with the disciplines of history and philosophy, and the kinds of activities associated with the teaching of children's physical education? Where is that question that will encourage a resolution of some of the problems about what kinds of content and method are most beneficial for prospective teachers? When it comes to considerations about the inclusion of experiences with history and philosophy, the previously neglected question might be phrased, "Is the teaching of children's physical education a rational human enterprise?" If the response to such a question is "No," then there is no point pursuing any further consideration of history and philosophy. Because both of those disciplines are themselves rational enterprises, a negative response is liberating and allows one to go on to other topics for conversation. If, however, the answer is affirmative, then including history and philosophy experiences becomes a viable curricular issue that warrants considerable discussion. This paper is based upon the assumption that teaching children's physical education is indeed intended to be a rational human enterprise, and the assertion that there is a subsequent curricular imperative to include experiences with history and philosophy.

THE PROMISE OF PHILOSOPHY

In discussing the promise of the study of philosophy for promoting teaching as a rational enterprise, three different qualities about philosophy demand attention. Philosophy is at once a process, a body of knowledge/content, and a product. As a process, the "doing of philosophy" encourages imaginative and flexible approaches to contemplating the "great" questions that define its content. For physical educators, that content is centered on the significance and meaning of the moving experience. Russell (1959) has suggested that philosophy as a process is *not* pursued for the sake of definite answers to its questions (for there are no answers to its questions) rather, it is pursued for the sake of the questions themselves. Philosophy as a process is a confrontation with the "great" questions that lie beyond the neat and precise boundaries of ascertainable knowledge.

It is within the processing of confronting great questions that the potential benefits for future teachers of children may reside. The proper "doing of philosophy" is marked by efforts to expand conceptions about what is possible through speculation and disciplined efforts to break away from the constraints of single-minded approaches to problem solving. Comfort in "doing philosophy" is, in large part, dependent on a growing acceptance of the inevitability of uncertainty as a normal state of being. Everything is always open to reinterpretation and redefinition. The potential to develop conceptual fertility and flexibility amid a growing acceptance of uncertainty may be identified as a key attribute fostered during participation in the philosophic processes.

The content, or "the stuff," of philosophy has been identified as the great questions, questions which lie beyond the techniques of science and beyond the luxury of resolution; metaphysical questions about the nature of reality, epistemological questions about what knowledge is and is not, aesthetic questions about the capacity of experiences to hold or communicate meaning, and ethical questions about the role of intention and outcome in determining moral actions.

The content of philosophy for physical educators is phrased as questions related to the significance of moving as an educational experience—questions about the perceived relationships between the mind and the body with implications for personal fragmenting or integrating; questions about forms of knowing which may exist only within the play-world of moving; questions about the nature of personal meaning experienced during participation; and questions about right and wrong actions in sport, dance, and exercise.

Dealing with questions about the significance and meaning of moving offers prospective teachers a crucial counterbalance for the scientific view of moving adopted in almost all other aspects of their professional studies. By asking broad questions, philosophy generates a body of knowledge that would be described more accurately as a body of ideas. Philosophy is organized to cultivate a different kind of knowing than is science. Science adopts a partial view of reality in order to grasp the intricacy and detail of aspects of existence. Philosophy fights to maintain the broadest view possible. Philosophic questions defy categorization into any one of the scientific disciplines because philosophies attempt to see each question as a problem within the context of all human problems. There is a unity about life as an experience that pervades the content of philosophy.

If teaching is decision making, and if it is an intelligent performance, then periodic wrestling with the great questions of philosophy could help a teacher retain that humanistic commitment. In addition to dealing with philosophy and human moving, crucial questions about professional practice are raised within philosophic patterns: questions about children's rights (e.g., their right to choose for themselves between fragmenting and integrating experiences), questions about teacher's responsibilities and obligations to children (e.g., decisions about when to intimidate or use peer pressure as a motivational technique), and questions about the design of physical education programs (e.g., should the program be structured to maximize skillful moving, decision-making skills, or physical fitness outcomes?).

In focusing on the broader questions about significance and meaning, philosophic content enables rigorous exploration of a variety of ideas that require the preprofessional to look at physical education in the contexts of education and culture. Physical education teaching does not occur in a vacuum, and the study of coexistent human enterprises is crucial to understanding the multiple interactions that influence the evolution of ideas as well as the effectiveness of professional practice.

Coming to terms with philosophic questions and engaging in active, honest discourse about them, brings the preprofessional to a point where a philosophic product is produced. The product is a commitment to a set of ideals that prescribe a structure and a function for children's physical education. If, as Toulmin (1972) has suggested, rational enterprises are shaped into disciplines according to the identification of a *shared* commitment to a sufficiently agreed to set of ideals, then the disciplinary status of the profession is at stake. The repertoire of procedures that characterize the teaching of physical education are produced in relation to a commitment (or lack of commitment) to a direction for changes in students' lives. There is no hope for arriving at any agreement about shared ideals until individual professionals have wrestled with such matters. Disciplinary effectiveness, then, is partially dependent on the degree to which members of the discipline have identified their own ideals. Children's physical education is destined to suffer from disparity in methods, content, and direction until teachers define their domain of commitment individually and collectively.

The potential impact of the study of philosophy for prospective children's physical educators extends beyond influence as preprofessionals. Experience with the processes and content of philosophy encourages individuals to develop comfort with uncertainty, the ability to approach problem solving in diverse and flexible ways, and the capacity to regard the physical education experience within the broader context of human existence. Experience with the products of philosophy also seriously affects the integrity and coherence of children's physical education as a professional discipline. Without an assemblage of shared ideals among personally committed teachers, there is no set of learning experiences that may be identified as the practice of physical education. Without such delineation of practice, there is no hope of translating outcomes of scientific research into practical guidelines, because there is no focus for that translation. Without delineation, there is no opportunity to initiate evaluation in order to gain insights about effectiveness. In philosophic terms, the question is "Who are *we*?" Without rigorous application of philosophic processes on philosophic content, the question is in peril of being neglected, in which case a de facto response occurs: "*We* are not."

THE PROMISE OF HISTORY

The study of history may be thought of as the study of changing patterns of action and interaction among various philosophical systems. The determining role of ideas and value orientations in the course of human events is documented in vivid detail within the study of history. In reviewing this documentation, not only are preprofessional students confronted with the power of philosophic systems, they also have the opportunity to become familiar with the wide variety of systems possible and with the implications of those systems on past practices in physical education.

When history is presented as the history of ideas and their impact, it becomes a rich opportunity to gain insight into which patterns to cultivate and which patterns to avoid. For example, the lack of well-defined problems in professional practice may be traced to the absence of clearly conceived disciplinary goals. Professional disciplines that have been ineffective in reaching their identified goals in the past, have been characterized by deficient bodies of literature. Disciplines having deficient bodies of literature include those professions in which there are few journals and other published works or in which the works are not well edited as well as those professions in which the flood of published information is overwhelming but for which there has been no coherent theoretical framework to organize it (Toulmin, 1972).

If preprofessionals are regarded as soon-to-be influences on the physical education profession, then the texture and sophistication they can bring to their decision making becomes critical to disciplinary survival. Experience with historical studies provides more than a sense of heritage and a feeling of joining an effort that is "larger than one's self." It offers preprofessionals a reference group with which to establish ties and through which to explore identity. For example, when examining the relationship between theory and practice in children's physical education, certain approaches to practice are *more* sophisticated than the information base generated through research. Not only is the amount of money and research time invested in the academic study of children's moving to fault, but the fragmented manner in which the academic body of knowledge about moving has been developed renders information from single, rather than integrated perspectives. As a result, the teaching of children's moving has been more responsive to thoughtful, imaginative designs by practitioners than it has to the partial and narrow pronouncements of "facts" that too often have been evident in children's moving research.

Studying the history of the profession is also an opportunity to come to terms with the unity and the diversity among ideals, both of which have characterized the teaching of physical education, a profession well over 2,000 years old. Professions have been framed around ideals that have been formulated in response to identifiable human needs. The competence of a professional is, in turn, measurable by how effectively he/she utilizes acceptable procedures to accomplish the goals for human welfare implicit in those ideals. There are both constants and cycles within the specification of the ideals and procedures of physical education. Studying these patterns of professional development and evaluation helps prepare prospective teachers to move into decision-making positions in their near future. Within this context, physical education is not a question of "what I believe," but of what the profession has accepted as its charge and mission within the broad scope of human development.

Bronowski (1978) has tied the study of history with learning three values on which, he suggests, scientific progress depends. Those values are respect, sensitivity, and tolerance, and they are associated with giving due favor to those who have taken the "previous steps"—those steps later discovered to be productive and those discovered to be counterproductive. Members of previous professional generations are thus recognized as individuals who made their effort in a given time and place and from a set of assumptions that may since have disappeared. Yet, respect is accorded to those who made efforts, who strove toward ideals with the procedures available to them. Sensitivity is thus cultivated for individuals caught in the shifts of paradigms and attending frustrations that accompany professional progress. Tolerance is acquired for the uneven rate of development evidenced by every body of knowledge, but always particularly difficult to accept in one's own profession where what one "needs to know" is always so much greater than "what is known."

THE FUTURE FOR PROFESSIONAL PREPARATION

The wisdom of including the study of philosophy and history in undergraduate professional preparation of children's physical education specialists is argued from the standpoint of process, content, product, and conceptual orientations. Although the logic and rationale for such a position is subject for continuous dialogue, there hangs a mist of skepticism around the discourse, which drains our enthusiasm for the debate. In immature disciplines, and physical education has barely reached that status, there is a reticence to embrace humanistic points of view. Scientific method and the status and credibility thoughtlessly associated with it, is taking us down the path of fragmentation. Philosophy cannot be tolerated in paradigms based on fragmentation of subject—at least that's what history tells us.

In immature disciplines, the drive is for standardization and compartmentalization. Teaching physical education to children will tolerate neither attitude, and, as a result, there is a tremendous gap between current research and professional practice. Without the skills of philosophy to help reassemble, unify, and integrate our body of knowledge, there is little hope that teaching can become a rational activity. Without recognizing the broader historical context in which professional ideals and procedures are couched, there is little reason to regard teaching as an enterprise.

So where is the future? Immediately including philosophy and history in undergraduate studies? After three decades of the blind pursuit of scientific methodologies, who would teach such courses to the preprofessional? Many of our current graduate programs offer no such opportunities. We have split and become a group of practitioners and a group of researchers who have been trained—not educated—to regard intuition and imagination as sloppy ways of thinking; who consider inspiration and the proclamation of professional ideals to smack of mysticism and ignorance rather than commitment and caring. Our academic conferences and conventions are becoming less idea-oriented and more concerned with status and appearance. Our professional organizations are becoming more concerned with self-perpetuation than with the fulfillment of a professional mission.

History is about tradition, impetus rather than inertia, identity, direction, and heritage. Philosophy is about ideas, hopes, dreams, intentions, and realities. Is there any room for history and philosophy in the preparation of the specialist in children's physical education? Only if we hope someday to make teaching a rational enterprise.

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Disciplinary Knowledge in Teacher Education Programs

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We have been asked to discuss the role of disciplinary knowledge in the preparation of elementary school physical education majors. We approach this topic with some trepidation. After all, debate over the role of the disciplines in physical education has continued for twenty years, and prominent teacher educators have been the most vocal critics of the disciplinary movement. Hence, trying to persuade an audience comprised of teachers and teacher educators of the value of disciplinary knowledge may be likened to the ambitious monk trying to convert Catholics to Buddhism. People simply do not change their faiths easily, nor are they likely to welcome conversion attempts.

Thus, we wish to state from the outset that we do not seek to convert members of the audience who are not true believers in disciplinary knowledge. Frankly, we are not interested in giving the audience a hard sell on the role of disciplinary knowledge because none of us believes that he has all the answers or that disciplinary knowledge will solve all the problems confronting teachers and teacher educators. Although conference organizers have asked us to summarize past arguments for and against the inclusion of disciplinary knowledge in teacher education, we also do not wish to dredge up old debates. Furthermore, we hope to avoid either/or thinking because we have learned from the past that it breeds hostilities; hence, for us, it is not disciplinary knowledge *versus* teacher education, nor is it *them*, the disciplinarians, versus *us*, the teacher educators.

We hope to provide members of the audience with a fresh, dispassionate perspective on the role of disciplinary knowledge in teacher education. This perspective has resulted from the discussion and compromise required when three different people are forced to reach fundamental agreement. One of us brings the reputation of being a disciplinarian, despite interests in professional education and teacher socialization. Another completed doctoral work in motor learning and development after nine years of elementary and middle school teaching experience. And our third member just joined a university faculty after over twenty years of elementary and middle school teaching experience. We have tried to frame a discussion that blends theoretical and philosophical issues with the very practical concerns of elementary school teachers and teacher educators.

TEACHER EDUCATION AND SCHOOL PROGRAMS: A REMINDER

We wish to begin with an important reminder—namely, that the question of how much, if any, disciplinary knowledge should be included in teacher education programs is ultimately a value judgment. For in the final analysis, *any* component in a teacher education program—performance, methods, and curriculum classes included—finds its value in relation to people's beliefs about the ideal teacher education program, the ideal elementary physical education program, and the ideal physical education teacher. And, there is every reason to believe that there is a substantial amount of disagreement on these ideals.

Even casual observation reveals that there are a number of competing program models both for teacher education and for elementary school physical education, and a recent study of teacher educators in physical education revealed a lack of agreement among them on the ideal teacher education program, school program, and physical education teacher (Mitchell and Lawson, 1984). Hence, just as pluralism in these programs stems from competing values, so do the competing values of teacher educators and teachers come into play when decisions are made about teacher education programs. The task becomes clarifying and then prioritizing these values prior to designing and implementing a teacher education program. So, like it or not, science is not likely to answer questions about how much, if any, disciplinary knowledge or the knowledge and skills in other content areas should be included in teacher education programs. In short, proponents of content areas cannot prove their views; they only can justify them by calling upon personal and societal views.

Having offered this important reminder, we now turn to four related topics for analysis:

1. Arguments for and against including disciplinary knowledge in teacher education;
2. Students for which disciplinary content should be designed;
3. Contribution of disciplinary knowledge to professional preparation;
4. How disciplinary knowledge may be used by elementary school physical education specialists.

THE PROS AND CONS OF DISCIPLINARY KNOWLEDGE

After surveying the controversial literature on the role of disciplinary knowledge, the following summarizes, in the form of problems, the arguments raised against including disciplinary knowledge:

1. The time problem. There is so little time in four-year degree programs in which to adequately prepare teachers. Students must meet requirements outside their chosen fields in addition to education certification requirements and the professional courses in performance and pedagogical studies in physical education. Add in the need for additional clinical and field experience, and the result is a jam-packed degree program for prospective teachers. Thus, there simply isn't time for disciplinary knowledge unless other, more appropriate courses are to be reduced or deleted.

2. The problem of resources. Expanding the amount of coursework in disciplinary knowledge means expanding the proportion of physical education department resources taken away from teacher education and given to disciplinary courses. Scientific labs cost money to equip and maintain, and departments that do so will have fewer resources available for teacher education courses. (The resources argument, like the time argument, is based on the assumption that decisions are part of a zero-sum game; so, it is assumed, no time can be added to a student's degree program and no new money can be added to a department's budget).

3. **The people problem.** Disciplinary coursework serves to attract persons initially interested in teaching to other occupational roles such as researchers and exercise leaders. In this fashion, some of the brightest prospective teachers choose preparation for a different career, affecting adversely the quality of school programs.

4. **The practicality problem.** Disciplinary knowledge has become so sophisticated and elaborate that it goes well beyond the needs of prospective teachers. For example, exercise scientists often ask elementary teachers to learn the biochemistry of the Kreb's cycle, even though the future teachers will never use this kind of information again. Hence, this coursework is impractical for elementary physical education specialists.

5. **The applicability problem.** The majority of disciplinary knowledge is derived from scientific studies using adults as subjects. Hence, much of it simply does not apply to the elementary school physical education specialist who must teach young children. Thus, the elementary physical educator is better off taking courses that are specifically focused on children, rather than wasting time with impractical disciplinary courses.

These five problems of time, resources, people, practicality, and applicability are, of course, related in the eyes of disciplinary knowledge critics. Together, according to the critics, these problems contribute to decreased effectiveness in teacher education programs and, by extension, in elementary schools.

Proponents of some measure of disciplinary knowledge in teacher education have tried to counter some of the criticisms. Proponents suggest the time required for teachers is already overstretched; the solution is to expand teacher education degree programs from four to five or even six years, thereby allowing students the opportunity to master disciplinary knowledge. As to the problems of people and resources, proponents of the disciplinary movement suggest that modern departments of physical education must include disciplinary labs and the career alternatives that go along with them. To do otherwise, while relying exclusively on teacher education in an era of teacher oversupply, is to mortgage a department's future. Finally, disciplinary proponents counter the practicality problem with an analogy. They claim that disciplinary knowledge is to the physical educator what mathematics and history are to the classroom teacher. In short, proponents believe that disciplinary subject matter should be taught in some form to elementary and secondary school students, in addition to movement performance skills and fitness activities. If this knowledge is to be taught to students, proponents argue, then it becomes practical by definition.

Aside from countering the arguments of the critics, proponents of disciplinary knowledge offer the following three general justifications for including this subject matter in teacher education programs:

1. **The contribution to liberal education.** By studying the art and science of human involvement in play forms and physical activity, students can derive a liberal education, or an important part thereof. Since colleges and universities

are supposed to educate students in addition to offering them vocational training, disciplinary knowledge is important to teacher education programs.

2. The contribution to professionalization. A profession like physical education requires people with special expertise. Physical educators who possess disciplinary knowledge are special in comparison to persons who do not. Thus, disciplinary knowledge helps physical educators to maintain or elevate the professional status of physical education teachers. This result provides greater job opportunities and security.

3. The contribution to occupational mobility. Many people leave teaching as part of a societal trend for people to change careers. Since disciplinary knowledge is not specific to teachers and school programs, it gives students a broad educational foundation that can support a future career as well as the more immediate teaching career.

The arguments about liberal education, professionalization, and occupational mobility, along with the counter-claims offered to disciplinary critics, are representative of a fair sampling of the previously expressed views of disciplinary knowledge proponents.

THE STUDENTS AND DISCIPLINARY CONTENT

Having dispensed with the past, we turn our attention to the present, starting with today's students, disciplinary knowledge, and professional preparation programs. The related issues stem from a central question—is there a curricular model adopted by a department for its professional preparation for all careers and specific career preparation for teaching? With the popularity of alternative career preparation, many departments have adopted a curricular model that has a disciplinary core; such a cluster of disciplinary courses is required of all undergraduate majors. Consequently, the content in these courses must be organized and disseminated in such a way that it appeals to students interested in a variety of career possibilities. While granting the advantages of such a model, it invites from teacher educators and teachers criticisms regarding the practicality and applicability of this disciplinary knowledge because it is not specifically organized and disseminated with reference to teachers and school programs.

Not all departments need adopt such a curricular model with its core requirement, but all departments engaged in teacher preparation and wishing to provide disciplinary content for prospective teachers face fundamental issues about how to organize and disseminate this knowledge. For example, should special disciplinary courses be reserved for prospective teachers? Should these courses be oriented to all teachers, or should specialized teachers receive equally specialized disciplinary courses? Is it sufficient to divide students into elementary and secondary specialists, or should middle school and adult education components be added? Do all such specialists have the same needs for the same kinds of disciplinary courses? Questions like these remind us that more than students' needs and interests come into play when departments confront such decisions.

Nevertheless, we should emphasize that too frequently it is the frame of reference of the disciplinary faculty member, not that of the students, that determines how disciplinary courses are organized and labeled. To cite a familiar example, the preconvention program reflected a frame of reference that is commonly found in departmental course offerings. We were given the disciplines, defined as motor learning, biomechanics, and exercise physiology, while Professor Bressan was given "the Foundations," defined as history and philosphy. Some would say that history and philosophy are disciplines, not foundations. And others, who label themselves something other than physical educators, can think of many other ways to further subdivide disciplinary knowledge. Returning to the original question, whose interests are served with these kinds of divisions—the faculty's or the students'? It would appear that students seek wholes stemming from syntheses, while disciplinary faculty follow their own interests in specialized parts. We suggest that this is the root problem regarding disciplinary knowledge in professional education.

In other words, the issue may be not so much one of the potential value of disciplinary knowledge as it is the way disciplinary knowledge is organized, labeled, and disseminated in teacher education. While neglecting students' needs for wholes, departments have allowed faculty to focus their courses on fragmented parts that reflect their specialized training and current research interests.

This laissez faire approach to curriculum building thus elevates faculty preferences over students' needs. A department that accepts this approach automatically ignores and possibly contradicts fundamental principles governing effective professional education. Moreover, such a laissez faire approach is not limited to disciplinary courses and their faculty; once the curriculum is driven by faculty self-interest rather than student need, all courses, including pedagogical studies courses, tend to fall prey to the same inversion. What a pity. But let's assume that we are in a position to return to the needs and requirements of students. While postponing for a few minutes the question of how to best organize, label, and disseminate disciplinary knowledge, it is appropriate to turn to a related question. Are there fresh ways to consider the potential contributions of disciplinary knowledge in teacher education?

TWO MORE CONTRIBUTIONS OF DISCIPLINARY KNOWLEDGE

Earlier, we identified the contributions of disciplinary knowledge to liberal education, professionalization, and occupational mobility. Now we wish to identify two other contributions that have not been discussed at length.

The first contribution stems from the teacher socialization literature (Lawson, 1983a; 1983b). Students choosing to major in elementary physical education often enter the program with a firm picture of the necessary preparation for teaching and the work they later will perform. Stemming from personal involvements in sport and physical education, this picture of elementary physical education has been called a subjective warrant. In principle, each student has a subjective warrant for each career alternative that has been considered; the process of occupational choice proceeds, in part, as this person assesses perceptions of each career's requirements against his or her aspirations, characteristics, and competencies. So, a student entering physical education has already done a considerable amount of occupational sorting. Elementary physical education has been selected because of the student's self-assessments in relation to past experiences and to an image of what elementary physical education teachers do.

Such a subjective warrant appears to be remarkably change-resistant. In fact, it is sufficiently powerful to support the suggestion that biography may be more important than teacher education programs in the socialization of the elementary school teacher. For example, if the would-be teacher enters the program convinced that elementary physical education is little more than supervised recess, then courses designed with a different view of physical education and emphasizing skill or concept learning will be met by the student in one of three ways. The students will openly reject the content, engage in short term compliance and impression management ("playing the game"), or adopt a revised view of the role of the elementary teacher and the purpose of the elementary program. Current thinking is that the first two alternatives are more likely to occur than the third.

Thus, if we want teacher education programs to have a greater impact on teachers resulting in greater uniformity and quality in elementary school teaching practices, then students' subjective warrants must become the new point of departure for teacher education curricula. These subjective warrants must be appropriately dismantled or revised on the way to beginning an induction into teaching. A systematic intervention directed toward this end would be informed by a discrepancy model; students need to learn and experience the ways in which their ideals for children's involvements in physical education are not effectively realized by the programs and teaching practices they envision offering. In brief, the need is for an integrated battery of courses or experiences that is predicated on critical analysis of existing programs and teaching practices.

Although some fuel for the fires of criticism can be derived from pedagogical studies, it is disciplinary knowledge, appropriately organized, labeled, and disseminated, that offers a most potent contribution. For example, would-be teachers who prize skill development in young children must see the ways in which current programs and practices ignore or contradict knowledge about developmental readiness, progression, practice organization, and other factors derived from the literature on motor learning, development, and control. Advocates of physical fitness must come to understand the ways in which time allocations and practices in many elementary programs make fitness gains all but impossible, given what is known about principles of training and conditioning. Proponents of the development of sportsmanship and playing games for the sheer enjoyment need to learn how the design of the performance environment and the structure of the game often result instead in the win at all costs ethic and the notion that if you aren't highly skilled you shouldn't play. In short, it is disciplinary knowledge that provides the basis for penetrating critiques that can dismantle students' subjective warrants. This is the first of the two contributions of disciplinary knowledge in teacher education.

The second contribution is related to the first. Simply, knowledge and understanding gained for purposes of criticism—for dismantling subjective warrants—may be constructively employed by students, teachers, and teacher educators to reinforce sound, existing practices and to build new ones for the future. By reminding students of safe and sound practices, disciplinary knowledge provides an innovative orientation in substitution for the custodial orientation usually associated with a subjective warrant. This is a clear example of the way in which professional education can help to improve the world of practice by providing intellectual leadership.

DISCIPLINARY KNOWLEDGE AND TEACHING PRACTICES

These two contributions of disciplinary knowledge to teacher education programs lead logically to a discussion of how these knowledges relate to the elementary school physical education specialist. We can approach this latter concern by dividing this teacher's tasks into process categories. One is *problem-setting*, the process of determining missions, goals and objectives—*what* elementary teachers should accomplish. The other is *problem-solving*, the process of implementing and evaluating missions, goals, and objectives—*how* teachers should accomplish their responsibilities. We begin with problem-setting.

We have established that a variety of elementary programs and practices exist today. And there is little reason to suspect that this variety will disappear immediately. At the same time that there is so little agreement, there are increasing calls for accountability.

We suggest that disciplinary knowledge is useful in deciding the goals and objectives for elementary programs in the face of such pluralism. School districts vary so much in the time and resources they allow for elementary physical education that it makes a canned approach to programming all but impossible. The prospective teacher needs to understand the alternatives—from social role learning, to ethical/moral development, to physical fitness, to skill development—and the requirements for effectively realizing them. Once employed in the school, the teacher can then decide what is possible in relation to what is deemed desirable.

For example, consider the specialist who must rotate among three elementary schools and who enjoys direct contact with students in the fourth grade and above. Seeing groups of students in each school only twice each week, with thirty-five students in each class, the teacher must decide what can be accomplished. The principal in one school wants physically fit students, while another principal wants highly skilled athletes. The teacher in both instances, armed with the knowledge about fitness and skill development, is in a position to assess the goals set and to amend them as necessary. At the same time, the teacher approaches the accountability question.

The key to accountability may be setting goals and objectives that the teacher knows can be accomplished given what is known about children's involvement in physical education and given the resources and conditions at hand. This kind of on-the-spot problem-setting is made possible by disciplinary knowledge; what the teacher strives to accomplish, while striving for accountability, is selected from a problem-setting arsenal acquired in teacher education.

Examples of the ways in which disciplinary knowledge improves the problem-solving efforts of specialists can also be provided. We have prepared a series of specific samples in Appendix A that are intended to show how disciplinary knowledge can be generally utilized in a teacher's work.

Thus, undergraduate students can be given (1) the ideal situation in which disciplinary knowledge is appropriately used to guide practice, (2) sample deviations from the ideal, and (3) the consequences of these deviations (Locke, Mand, and Siedentop, 1981). Not only will these examples have a better chance of penetrating students' subjective warrants, they also provide practical examples of the ways in which disciplinary knowledge may inform the problem-setting and problem-solving activities of teachers. Having said this, the question remains about best ways to organize, label, and disseminate this knowledge.

ORGANIZING, LABELING, AND DISSEMINATING DISCIPLINARY KNOWLEDGE IN TEACHER EDUCATION

We wish to conclude with brief observations on ways to organize, label, and disseminate disciplinary knowledge. The first is that there are many possible ways to construct courses aimed at giving students disciplinary content, and little reason to believe that one is inherently any better than the others. Yet, this basic observation may not always be so obvious because of the way in which the disciplinary movement has evolved in physical education and in the current perceptions and actions of disciplinary faculty.

Some proponents of the disciplinary movement see it as totally divorced from teacher education, if not from physical education. These persons label themselves and their courses after a parent discipline (e.g., sport psychologists/psychology, sport sociologists/sociology, and exercise physiologists/ physiology). Together with the laissez faire approach to curriculum, these persons have added specialized courses to departmental offerings. Quite commonly, departments fitting this mold have separate courses in motor development, motor learning, motor control, exercise physiology, biomechanics, sport history, sport sociology, sport psychology, and sport philosophy; nine courses in all. So, a prospective elementary teacher would have to take all nine in order to gain a foundational sampling of disciplinary knowledge. This invites criticism from teacher educators and teachers regarding time, resources, practicality, and applicability; and, since this is the dominant way to organize, label, and disseminate knowledge, it is tempting to assume that this is the only way.

Other ways stem from a crossdisciplinary framework. Unlike the interdisciplinary framework that borrows everything from the parent discipline, the crossdisciplinary framework allows the organization, labeling, and dissemination of knowledge in our departments to be somewhat unique. The crossdisciplinary framework is question-driven; knowledge is organized and disseminated in relation to the questions asked in courses.

The more familiar way to use the crossdisciplinary framework is just a short departure from the interdisciplinary framework. Here disciplinary knowledge is to be organized and disseminated quite apart from any application, particularly in teacher education. This is more of an arts and sciences orientation, rather than an orientation fitting a professional school. Even so, the same nine courses required in an interdisciplinary framework can be assimilated into three one-hundred level courses in an introductory framework, courses called, for example, motor skill learning and performance, exercise and health, and meaning and values in sport. Questions regarding the nature and definitions of physical fitness, health, skill, learning, performance, play, games, and sport organize the content. Together, these courses provide a foundational understanding of disciplinary knowledge that might well fit the needs of the elementary school teacher.

Yet, there is no reason why disciplinary content cannot be directed to specific questions about elementary school physical education teachers and their programs. The fact that the questions are applied to schools and teachers does not make the knowledge employed any less disciplinary (or crossdisciplinary). It simply means that disciplinary content is brought directly to bear on questions about elementary school physical education. For example, a course on elementary school curricula could consider appropriate goals and learning outcomes for students such as encouraging life-long participation and developing positive self-images in children. In order to pursue these goals intelligently, the course would necessarily consider in detail the findings about childhood socialization into sport and physical activity as well as the relationship among movement involvements, body perception, and self-concept. In the interdisciplinary framework, the subject matter would be part of two separate courses in sport sociology and sport psychology, respectively. Here, it is a practice-oriented part of one course.

In summary, we suggest that all of us should give more systematic attention to the curricular models we employ for teacher education programs. Furthermore, we need to review how we organize, label, and disseminate disciplinary knowledge in selected courses. There is no question that problems have arisen in teacher education because of the disciplinary movement, but these problems might have been predicted. After all, the disciplinary movement is just twenty years old, and so we should not be surprised when we share its growing pains and experience confusion over its directions.

If the heated debates of the past have done nothing else, they have allowed us to share perspectives, resulting in mutual learning. Moreover, conferences like this support the contention that the time is ripe for a fresh examination of the role of disciplinary knowledge in teacher education. This is the spirit that we adopted and have tried to convey in our paper. We recommend the same spirit and perspective to others who wish to further explore the role of disciplinary knowledge in teacher education programs for elementary specialists.

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APPENDIX A

Specific Situations That Illustrate The Teacher's Use of Relevant Disciplinary Knowledge

Situation: Ellie is in fifth grade and is extremely overweight. The physical education instructor has prepared a traditional tumbling unit for Ellie's class.

Ellie will be asked to perform forward and backward rolls, cartwheels, and headstands.

Growth and development. The instructor's knowledge of maturation levels for this age would allow for developing an alternative program based on Ellie's weight problem and lack of strength.

Biomechanics. Lack of upper body strength, amount of weight to be supported, and possible lack of body control could be areas of concern for the instructor.

Psychology of learning. Learning theory would suggest that the teacher provide alternative activities such as log rolls or shoulder rolls so that the student would be able to experience some degree of success.

Exercise physiology. An individualized program of exercise focusing on weight control, stretching for flexibility, and strength is recommended.

Situation: Bob has been unable to hit a softball from a batting tee during a fifth grade softball unit. He has become very frustrated and does not want to participate.

Growth and development. Bat weight and length, ball size, and height of the batting tee need to be matched to the developmental level of the child.

Biomechanics. The teacher's knowledge of biomechanical principles can assist Bob in the following ways: 1) improve the position of the arms when holding the bat, 2) change the position of the feet in relation to the tee, and 3) emphasize that the head is "down" over the ball when contact is made. Stress the transfer of weight from the back foot to the front. Improve the smoothness of the swing; level swing. Follow through.

Psychology of learning. The instructor could restate the task and possibly provide manual assistance in helping the student strike the ball. Positive reinforcement would be necessary to support the student. Success!

Situation: A fifth-grader is trying to master the basketball lay-up shot and needs help.

Growth and development. The student's maturation level, especially in relation to the strength needed to perform this skill, would be important to the instructor.

Biomechanics. Principles relating to the hurdle step and the vertical leap would help the teacher with presenting this skill. Transfer of weight, balance, and proper landing would also be emphasized.

Psychology of learning. Encouraging the student to work without the ball, to practice the hurdle step at the wall or basket would be helpful.

Situation: The children's soccer kicks are very weak and many children lose balance after kicking.

Biomechanics. Place the support foot near the ball to aid balance. Bend the support foot to allow weight to transfer into kick for more force production. Suggest using arms during kick to aid balance.

Learning/Psychology. Focus on the ball during the entire kick. Stress the relationship of the part of the foot which contacts the ball and the part of the ball contacted. If possible, build the movement required into non-ball work, such as dance.

Motor development. Soccer kicks for accuracy are difficult for ages six and under. The teacher needs to observe the present level of children's kicking to determine if the task is relevant. Perhaps some work with stationary balls may be warranted with larger and softer balls used initially.

Situation: Kindergarten children cannot comprehend or perform the intended folk dance after two complete lessons and repeated, varied instructions and demonstrations.

Growth and development. Children of this age have a limited memory and may not be able to sequence the steps. The uneven number of hops required on the left and right foot are extremely difficult to do until about age ten; the task is too difficult. Rationale for young children's dance may be opposite of objectives in folk dance.

Motor control. Simultaneous instruction in the visual and auditory channels may be too difficult for the child's present functioning in integration of these two channels.

Situation: A teacher has children 60 minutes once a week and wants to develop physical fitness abilities.

Psychology. A system of motivation outside of class with possible external awards is one possibility. The teacher must develop a support system of involving other teachers and students who help with progress toward the stated objective. The teacher may decide to teach concepts about personalized exercise and motivate students for individual application.

Exercise physiology. A knowledge of training (duration, intensity, frequency) prohibits the objectives from being achieved during the instructional time allotted. Three vigorous training periods per week are required to develop fitness. The teacher needs to drop the objective or devise a workable solution.

Situation: Children continue to have collisions during quick changes of direction in simple group tag games.

Growth and development. If the children are three to five years, the large heavy head may be a factor in stopping. The perceptual control may not permit full speed starting and stopping in the entire space by all the children. More work individually or in smaller groups may be helpful.

Biomechanics. Has the teacher stressed that a wide base and lowering of weight aid in stopping? Is there a need for practice on starting and stopping rather than the group game?

Psychology. Does the excitement of the game take priority over skillful movement or safety for the children? Should skill development rather than the game end be the real objective?

Situation: Billy has severe balance problems which prevent him from enjoying success in most playing activities. His classroom teacher hopes that increased balance will improve his reading.

Biomechanics. Balance is largely a matter of controlling the body's center of gravity in relation to the base of support.

Learning/Psychology. Current research shows no causal relationship between increased balance abilities and increased reading abilities.

Motor control. Balance control occurs in the proprioceptive, vestibular, and visual systems. Each could be a part of the problem or one could be the main problem. Balance is quite complex and not understood well. There are stationary, moving, and object balancing aspects which may not be related significantly. "Task characteristics might include body movement, stability of base support (stable-unstable), use of vision (vision-no vision), body position, body elevation, number of support limbs, and nature of support surface (stationary-moving)" (Williams, 1983, p. 273). Sequences and progressions may involve manipulating these in relation to Billy's present abilities. First, establish a static proprioceptive/vestibular pattern of functioning in a stable position with vision guiding or supporting. This pattern may then be varied by eliminating the vision or by modifying the basic pattern (i.e., body position, inversion). A variety of balancing experiences is preferred over skill in a specific, perhaps isolated, skill like forward beam walking.

Situation: Thirty first-graders are playing a ball game for the entire class period. Play is interrupted frequently for skill and rule disagreements and there is considerable off-task behavior.

Growth and development. Rules may be too complex for the cognitive level of the class.

Learning/Psychology. Six-year-olds need considerable practice alone or in pairs to develop skills in manipulation. Cooperative games are recommended before competitive games. Children cannot cope with complex rules and strategies present in many prestructured group games. Many learning attempts are necessary to achieve skill objectives at the primary ages. Is the planned activity the best way to achieve the lesson objective? One ball and thirty children produces a situation that may preclude learning success for many children and invites off-task behavior.

Situation: Joe is a fourth-grader who has extreme difficulty in accomplishing even the simplest of motor tasks (i.e., running, throwing, catching, balance, etc.). His walking gait is very uneven, he cannot complete tasks that involve upper body strength and, in general, he has considerable difficulty with all motor tasks. Joe also has a weight problem.

Growth and development/Motor development. Determining Joe's stage of development would be essential to prescribing remediation. What kinds of locomotion problems does he have? Walking and running problems dictate that the teacher should develop one-on-one situations where Joe could work on specific locomotion tasks. The teacher could analyze position of feet, body balance when moving, position of pelvis/hips, use of arms and other factors important to these locomotion tasks. Throwing and catching difficulties should also be analyzed with specific attention to: backswing of arm, position of legs/feet, hip rotation, step to target, throw in opposition, position of elbow and lower arm, follow through and others (throwing); visual cues for catching, tracking the thrown ball, receiving the ball (what part of hands should receive the ball), giving with the thrown ball, and others.

Biomechanics. With the multiple motor problems that this youngster has it would be necessary for the teacher to know the principles of biomechanics that relate to his specific problems (i.e., pelvic balance needed for proper walking and running).

Psychology of learning. Knowledge of the theories dealing with improving skill through practice, environmental conditions affecting skill development and whole/part concepts would assist the teacher. Recommendations to parents might include the improvement of the home learning environment to include much more motor activity (i.e., walking on errands, riding a bicycle, working with ball activities).

Exercise Physiology. Measurement of Joe's strength, flexibility and cardiorespiratory capacity will assist the instructor in making suggestions for a program of remediation that could include: 1) strength and flexibility exercises, 2) increasing the amount and duration of walking, cycling or related activities, and 3) improving nutritional habits and diet.

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APPENDIX B

Additional Situations That Emphasize Application of Disciplinary Knowledge

Situation: Carol is a sixth-grader who enjoys running and has just completed a distance run of a mile on a bright, sunny day. As she finishes the run, she becomes faint, overheated, and dizzy. She is administered to by the physical education teacher.

Growth and development. The teacher's knowledge about readiness levels of 11 or 12 year olds for distance runs of this type would be important.

Biomechanics and psychology of learning. The teacher should have knowledge of the biomechanics of running and prepare a thorough program of instruction prior to the time that students participate in the activity.

Exercise physiology. A need for basic understanding of heat stroke, loss of body fluids, and other problems associated with the rise in body temperature would help the instructor deal with this emergency. Prevention, as well as treatment, needs attention. Principles of progressive endurance training and adaptation should be implemented prior to requiring long distance runs.

Situation: A second-grader is afraid of jumping from a low vaulting box.

Growth and development. Knowledge of the child's previous jumping experiences would be important. Readiness for this task would be crucial.

Biomechanics. Assisting the child to master the following concepts would be important: 1) bending the knees on landing; principles of soft landings, 2) position of the feet when landing, 3) use of arms for balance, and 4) add collapsing from the landing (go into a roll).

Psychology of learning. Encourage and support the child with positive verbal cues. Attempt initial jumps/landings on the floor first, then try a low height, then go to low vaulting box when the child is ready. Do the jumping with the student.

Situation: A fourth-grader, during the first week of his attendance at the school, attempts to hold a stationary hand position on the parallel bars. His arms give in and he hurts his chest; there is little pain but an x-ray reveals a fractured sternum.

Growth and development. The teacher observes the skeletal and muscular system and suggests a simple progression of balance work on the floor and low bars prior to work under the bars and then above the bars. Remedial activities are prescribed to strengthen the chest musculature.

Learning. An appropriate sequence of lead-up activities is necessary.

Exercise physiology. Review of strength improvement ideas for younger children.

Situation: A parent asks at what age should she/he enroll a five-year-old child in youth sports.

Learning/Psychology. A wide base of generalized skill development should precede specialized skill development. The child is in an egocentric stage of development and is preoperational in cognition. The five-year-old has severe limitations in skill combining and in strategy conceptualization. There are some commonly held beliefs about the bases for quality youth sports programs.

Motor development. Assessment of current patterns of movement is a first step in that decision. Social and emotional needs of the child and parents also impact this decision. Skeletal and muscular readiness must be assessed.

Motor Control. The brain/nervous system may not permit much success in team related sports. The five-year-old has limitations, both perceptually and cognitively, that may preclude maximum benefits from these programs.

Situation: A sixth-grader genuinely wants to be successful doing a straddle vault but cannot spread the legs wide enough.

Learning/Psychology. Shorten the width of the vaulting horse or box in a sideward direction and then gradually lengthen the width for success and challenge. Provide adequate spotting.

Exercise physiology. Stress the relationship of flexibility to the target task. Emphasize stretching statically and plan for intensity, duration, and frequency of training.

Situation: Third-graders are having trouble holding balance positions, including inverted positions, frog stands, head stands.

Growth and development. Do the students have enough strength to complete these tasks? If they possess adequate strength, then is balance the problem?

Biomechanics. Do the students understand the concept of a triangle for stability?

Learning/Psychology. Has there been an appropriate sequencing of prior activities? Are the instructions clear enough? What is the rationale for giving the same task to all students; how does this meet individual differences in the class?

Situation: Kindergarteners, except for one girl, are unsuccessful in standing after a forward roll attempt.

Motor development. Did the instructor teach a generalized concept of the roll previously? The teacher needs to know the stages of the roll and how young children "lose the curl." Was adequate arm strength checked previously, as well as abdominal strength? The teacher must know that the large size of the child's head may make the entire forward roll difficult to initiate and to finish (curl). Are there process components that the teacher should attend to rather than the final standing position?

Situation: Sixth-graders want to break the school record for the 200-meter running relay. They plan to hike 20 km each week, jog daily, and swim 500 m each weekend.

Biomechanics. Starting techniques need to be analyzed and taught, especially for the initial runner. For optimal results, the relay baton needs to be passed with both runners at the maximal speed possible. The teacher must be able to analyze the start and exchanges visually and mechanically.

Exercise physiology. Do students understand the difference between aerobic and anaerobic work? Interval training or other anaerobic training is indicated. Effects of warm-up and cool-down must be included. Training must occur at least three days each week for improvement to occur.

Psychology. Frequent practice, at least three times a week, is preferred over the one time training tasks. The four people must adopt a "we" attitude rather than a "me" attitude to fully appreciate the team concept.

Situation: John and Jane have little success in catching a ball in the primary game named Call Ball.

Motor development. The hypothesis for trajectory includes success first with slightly arced balls in a horizontal direction prior to expected success in the vertical plane. The game requires movement prior to catching a ball. Were there adequate experiences prior to this new, more complex task? The predictability of the thrower's vertical toss is not good at this level; the catcher's success depends to a great degree on the accuracy of the toss. Has this been achieved prior to this game?

Learning theory. Groups of ten children, or even five, for this lead-up game may not be justified, especially at the younger ages. The teacher must observe catches carefully and offer specific suggestions for improvement.

Situation: During a second grade lesson, many children have little or no success in catching balls with high arcs.

Biomechanics. Force may be absorbed easier if spread over a longer distance. Instruction or questions about force absorption could possibly affect the catching, especially for descending objects.

Motor development. The teacher must determine whether students have had sufficient experiences with balls of lower trajectories. If not, change the task to include successful catching at lower trajectories. The equipment also should be assessed; if fear is the problem, a change to lighter and softer objects may be used with gradual changing to harder, heavier balls. Careful analysis of present catching process and also visual pursuit are suggested.

Learning theory. Use of varied cues, including more individual feedback, may be needed to clarify the task and set appropriate modifications for different children.

Situation: A child is having difficulty throwing a softball toward a wall target. The teacher suggests a change of grip and throwing harder while watching the target intently.

Growth and development. Observation of the throwing stages is important for initial observation with the hip/trunk action taking priority over other aspects. A smaller, perhaps lighter-weight, ball that more appropriately fits the size of the child's hand is recommended.

Biomechanics. Developing force over a longer distance will produce more force. Possibilities include "opening up," taking a longer step to aid the weight shift, and bending the front knee.

Learning/Psychology. A more colorful and attractive target may aid attention and motivation if these are the problem. Perhaps less emphasis on the target or a larger target is needed if the child is very young. The task may need to be reworded if clarity of directions is suspect. The entire task may need to be changed if the child is very young.

APPENDIX C

What Disciplinary Knowledge Might Be Relevant to The Following Instructional Situations?

1. A fourth grade student cannot climb a vertical pole or rope.
2. A fifth grader cannot perform a bent-knee sit-up.
3. A skilled sixth grade tumbler wants to learn how to do a back handspring.
4. A second grader has learned to swim in an aquatics group, but is afraid to dive. The student expresses a desire to learn how, but is hesitant to try.
5. A teacher is starting a first-time-ever folk dance unit with sixth graders. What instructional problems may be encountered for the group and for individuals?
6. A skilled third grader complains of boredom during movement lesson dealing with ball manipulation. The student has exhibited superior throwing/catching skills.
7. Little progress has occurred in learning strategy concepts and applying them in game situations.
8. Physical fitness scores for the entire school indicate placement in the lower five percent of schools in the state.
9. Sixth graders complain of tiredness during most lessons.
10. Over a period of weeks, hard feelings continue as a result of the outcomes of numerous competitive games. Winners and losers show no sportsmanship or other desirable behaviors.
11. Children continue to work and play in the same groups. Little interest in or concern for the other groups is evident.

The Great Teacher Education Legend

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In a time not so long ago, in places not so far away, there came a diverse people to settle this land. They came from many places and for many different reasons; some primarily for the promise of gain, but most to escape the political, religious, social, and economic coercions imbedded in the cultures of their homelands. While a few wanted nothing so badly as to transplant faithful models of their home cultures here, the majority were instead anxious to build a new culture, adopting rules and developing customs that were more tolerant and just than those from which they came.

Some of these people found here a hope and promise for the future that had been absent in their homelands. Many, in fact, came with that hope burning deeply within them—indeed, that was all they had when they left their homelands. Thus, they were an optimistic people, and had to be in order to survive in a new country which was not always hospitable either physically or socially. Because they escaped from aversive political, social, economic, and religious controls, they rightly spoke out against similar coercions in their new land. And, because most of them came from cultures steeped in the traditions of the aristocracy, they spoke strongly for political and religious egalitarianism. Mind you, our country then was far from egalitarian in any absolute sense, but the rhetoric was clearly egalitarian and our forebearers embraced it warmly and proclaimed it widely, and it became central to their shared mythology.

Of course, the rhetoric of hope and optimism was not extended to all new people who came to our country, especially not to those who were brought here against their will. While most of the new settlers came with and developed dreams for opportunity and advancement, those brought here against their will would have to wait several hundred years before they would have their own dreams.

Some of the new institutions in this land developed quickly—government, for example—and differed radically from those in the homelands from which the people came. Other institutions—education, for example—developed less quickly and differed more in form than in substance. But, most of the citizens of this new nation had been raised in places where education had been one of the surest signs of class privilege. So, as the nation became more secure politically and economically, it is not surprising that education was one of the first institutions to be "declassified" and linked gradually but strongly in our emerging national vision to the growth and protection of democratic participatory government through an informed citizenry.

The culture of our land developed in a period that later would be referred to as the Enlightenment, a time when rational thought and individual rights were supreme values, and a time when these primary values were assumed to be most readily acquirable through a rigorous study of the liberal arts. A teacher in this Enlightenment scheme was any person who had completed the liberal arts curriculum. The tradition of liberal arts as professional preparation for teaching dated back to the medieval university where the arts degree served as admission to the guild of professional teachers. This was a venerable tradition and it provided the basis for the Great Teacher Education Legend, *the notion that study of the liberal arts is the best preparatin for professional service;* a notion, as we shall see, that is alive and well today.

During the first century of our nation's history, a field called education began to differentiate itself from its parent disciplines, which, of course, were the mental, moral, and natural philosophies. It was perhaps necessary, or perhaps just serendipitous, that education emerged and developed as a distinct field at just that time in our history when the Enlightenment tradition of liberal arts as teacher education began to collide with the egalitarian movement supporting common schools and universal education as a birthright.

Before the nation celebrated its 100th birthday it had become clear that universal education in a system of free public schools was to be the repository within which our vision of hope and opportunity was to be placed in trust. The young nation had grown, not only with second and third generation citizens, but also with a continual influx of new citizens, attracted by the hope for social and economic improvement, mediated supposedly by equal access to free, quality education. The existing system of mostly private colleges and secondary schools was sufficient to prepare the small cadre of liberally educated persons who, as teachers, passed on the higher culture to the sons and daughters of the wealthy. But this system could not provide the numbers of teachers necessary to teach the children of the newly enfranchised masses in rural areas of working men, immigrants, and children. And, leaders in the early common school movement actually believed in and acted upon the American dream, therefore opposing the development of separate schools for members of various economic, ethnic, or religious groups. Thus, as common schools grew, a system of normal schools developed as companion institutions, places where useful knowledge and commitment to teaching were valued more highly than preparation in the liberal arts, thereby posing the first real threat to the Great Teacher Education Legend.

In retrospect (Borrowman, 1965), it seems clear that the normal-school movement merits the principal credit for developing the ideal that elementary and secondary school teaching should command the prestige and commitment to service typically characterized as professional, and, during their reasonably brief history, they did indeed begin to call into question the assumptions of the Great Teacher Education Legend. But their time was short.

As our young nation expanded westward, new universities developed in which the liberal arts traditions of the East were deemphasized in favor of technical preparation, particularly in agriculture and engineering, and, thus, did useful knowledge move into the university. It should be no surprise then that, as education developed in the western expansion, the function of the normal school was seen to be compatible with the newer version of the university. In fact, one midwestern state's first and greatest teacher education institution was called Normal University, symbolizing the wedding of the two institutions and pointing the way to the near future when the teacher education traditions of the liberal arts college and the normal school came together in the universities and colleges. So quick and complete was this amalgamation that by the time the nation marked its 175th birthday, the study of education and the certification of new teachers was a function of nearly every university and in most liberal arts colleges.

As the pure normal school and liberal arts teacher education models, once amalgamated, ceased to exist within the new university, the resulting programs did not represent syntheses of the best of each tradition. As arts and sciences units within the university came to differentiate themselves from professional units, a similar battle waged within education units, in this case between people one might describe as foundations professors, devoted primarily to the liberal arts tradition, and methods professors, devoted primarily to the normal school position. Thus, the Great Teacher Education Legend was perpetuated and even institutionalized in the educational foundations faculties and programs.

In fact, the notion of liberal arts as professional preparation—which is the Great Teacher Education Legend—probably gained renewed strength during this period of amalgamation because the normal school traditions were based both on a sense of craftsmanship heavily supported by folk wisdom and on the development of a nearly quasi-religious professional commitment, and neither craftsmanship nor professional commitment were compatible with the mores of the university. The approach that had worked so well in the normal school was doomed in the university. To be sure, attempts were made to integrate the two traditions in some meaningful way; to make the liberal arts approach more concrete and significant and to make the normal school approach less mechanical and more thoughtful. But these efforts largely failed, perhaps simply because the institution within which they were attempted was also changing.

The university was evolving toward a multidimensional mission with a major research commitment. Professors not only had substantial autonomy in course and program development, but the sheer size and diversity of the institutions created situations in which few professors saw teacher education as their primary concern or were rewarded by the university if it did remain their primary concern. What resulted from this history was a partial cease-fire among the opponents, a truce in which the liberal arts tradition was institutionalized in the educational foundations, and the normal school tradition was institutionalized in the special methods and practica. While this eclectic (Borrowman, 1965) model was assumed to be built on mutual respect and made useful through integration and cooperation between the two curricular streams, experience tells us that distrust and resentment were as frequent as respect, and, if articulation were to occur, it would remain for the student to achieve that deceivingly difficult task.

The foundations professor—and those who have supported that position—looked at methods courses and saw recipe swapping and personal testimony instead of rigor, substance, and theory, and they described it as shabby and anti-intellectual. The methods professor—and those who have supported that position—looked at the foundations courses and saw busy-work and unidimensional interpretation (a more intellectually fashionable form of personal testimony), and they described it as irrelevant. This debate typically has been waged within the university, and the main outcome has been a shift in student credit hours rather than a better preparation for teachers. Further, the outcome was often a foregone conclusion because the university has a substantial historical investment in the Great Teacher Education Legend.

Perhaps even more devastating were the real animosities and wars created when foundations professors disparaged methods courses and ridiculed the efforts of teachers and when methods professors reacted with an almost hostile anti-intellectualism. Most sadly, the result has too often been what a leading teacher educator (Joyce and Clift, 1984) recently described as a "fragmented, often meaningless curriculum for prospective teachers" (p. 9).

In the post-Sputnik era, when the nation turned its attention several times to the quality of schooling and the preparation of teachers, the Great Teacher Education Legend thrived, receiving substantial support from reformers and critics if not from teachers and other front-line professionals. Conant (1963), Bestor (1955), Rickover (1963), Koerner (1963), and Adler (1982) consistently promoted the liberal arts as the professional preparation model to the point where the technical training of teachers was completely downgraded, suggesting directly or implying indirectly that there is so little substance to pedagogy that the basic education of the teacher should be in liberal arts and sciences followed by an apprenticeship on the job.

When this argument was waged in the early part of this century, the outcome, in all honesty, probably didn't matter a great deal. There is little to suggest that either the foundations or the methods aspects of teacher education curricula were sufficiently important, either substantively or practically, to make a difference in the performance of the newly certified teacher. It's not that education lacked a research base, rather, teaching research was so ill-conceived that the results were more confusing than illuminating and of virtually no practical import to the preservice or inservice teacher.

Today, however, the argument is being waged again. It is being waged in earnest. The Great Teacher Education Legend is everywhere—from Adler's *Padeia Proposal* to *Newsweek*. And, now the outcome matters a great deal.

In the past quarter century, educational researchers have developed a knowledge base for the technical aspects of teaching. Although this knowledge base has developed from research that is predominantly correlational in nature, a sufficient number of experiments have also been completed to feel confident in assuming that the relationships among technical teacher skills and student outcomes are functional. The research underlying this knowledge base has been almost exclusively naturalistic, ecologically valid, and inductive to the point of being atheoretical. But that does not mean that the results cannot eventually be incorporated in an inductively derived teaching/learning theory, nor does it mean that the dimensions of the knowledge base do not fit existing theories.

To be sure, the knowledge base is incomplete and lacks widespread generality but it is sufficiently potent that B. O. Smith has argued for it to become the most immediately referential foundation science for all teachers in training. To be sure, the research tended at the outset to focus on discrete skills of a fundamental nature but that is exactly where a skill research program should begin. Also, extensive sets of discrete skills chained appropriately and applied discriminatively begin to approach the kind of higher order repertoire typically implied when referring to skilled performance in a complex endeavor. This body of knowledge on the technical skills of teaching represents the most serious threat thus far to the Great Teacher Education Legend, not only because of its obvious implications for the teacher education curriculum but, more importantly, because it has been developed and can be applied in a manner consistent with the canons of proof and standards of inquiry existing in the university. This new threat to the Legend lies in one central fact—if there are valid, learnable teaching skills that are essential to effective educational performance, then their acquisition should form the central mission of the professional content of teacher education.

Many of these skills are familiar to you—the problem is certainly not that they are unknown. They include (but are not restricted to) the teaching of classroom routines that reduce ambiguity and increase predictability within the educational setting; the practice of managerial strategies which optimally reduce the potential for inattention, misbehavior, and disruption; the social interactive strategies that relate both to the maintenance of a business-like climate and the emotional support necessary for persistence and striving; academic interactive strategies that relate both to setting conditions optimal for promoting appropriate student responses and reacting appropriately when those responses do occur; the planning for and management of time and the individual student's use of that time in ways that optimally promote learning; the skills to interpret and respond to student behavior that not only influences teacher actions but also influences the basic academic contingencies in the setting; the skills to analyze a subject matter so that its presentation can be made appropriate to the often diverse needs of individuals within and between classes; strategies for holding students accountable for performance while minimizing anxiety; and skills for discriminating what is good for students to learn from among the many choices available in current curricular approaches to various subject matters.

These are teaching skills that have been validated empirically against achievement and personal growth criteria. For each skill that has been confirmed in classroom instruction for cognitive content, there is a perfectly reasonable analogue for physical education. There is no reason to think that the power of these strategies is modified by that transfer. To the contrary, data from teaching research in physical education tend to confirm the generic nature of pedagogical skills.

Each of these skills can be task analyzed, practiced for improvement, made gradually more complex, and blended with other skills into a discriminative repertoire. There is mounting evidence (Siedentop, 1984) that these skills can be acquired by ordinary young men and women in teacher education programs and, that when acquired to a level of reasonable competency, they tend to be used. The training protocols for achieving skill development in teaching include microteaching, behavioral rehearsal, role playing, miniteaching, practice with feedback, peer tutoring, modeling, and concept formation (Siedentop, 1984).

There is also evidence that teaching skills do not develop unless they are trained, that is, the normal lecture/discussion method plus field experience approach to educating teachers, even when focused on these skills, does not typically result in their acquisition or use. Thus, one should not expect that Stallings' (1983) recent suggestion that *information* from research on teaching incorporated into methods courses and foundations classes, if implemented widely, would have any effect on the performance of teacher candidates! However, the evidence demonstrating what properly *trained* teachers can do will not go away. Teacher effectiveness and school effectiveness will continue to be pursued both through research and in the world of practice.

Given this recent history of research on teaching effectiveness and teacher training, how is it then that the Great Teacher Education Legend survives? Not only does it survive, it is alive and well, currently being prosecuted both within the education professions and outside them! Today, when one hears something about the need for better teacher preparation, the prescriptions that follow seldom refer to better training in the technical, professional skills of teaching or to the commitment to persevere in their use. Instead, one is much more likely to read or hear about the need for more extensive preparation in the liberal arts; more extensive subject matter preparation; and some typically vague references to what can only be described as an apprenticeship period in schools, where the teacher-to-be can pick up what little there is to know about teaching from those who are already doing it. This is the contemporary version of the Great Teacher Education Legend. It devalues pedagogy. It, indirectly at least, implies the breakup and eventual elimination of education units as bases for the preparation of teachers. *A Nation at Risk* criticizes teacher education programs for their overemphasis on courses in educational methods, and the phrase educational methods is set off with quotation marks symbolizing their unknown role and assumed low quality. The Padeia Group eliminates any professional education experiences from its teacher preparation proposals, calling instead for a thorough liberal arts preparation that is simply a university version of what they propose for the public schools.

In light of this recent spate of criticism about schools and teacher preparation, it is not surprising that members of the education profession have responded with reform notions of their own. What is surprising, almost mind-boggling, is the number of educationists who have interpreted calls for their own extinction as a "window of opportunity."

Within teacher education, the response has clearly been to abandon the undergraduate teacher education program and to replace it with either an extended six year program (Gideonse, 1982) or with a graduate level professional school (Smith et al., 1980). Most of this in-house reformist literature is highly idealistic in substance and, while tremendously interesting, abandoning undergraduate teacher education is not very likely to be achieved in the foreseeable future. Even in the ideal visions of teacher educators, training in technical skills does not appear to be a high priority, taking a consistent back seat to intellectual qualities supposedly forged through contact with a liberal, professional education. In this literature, too, the Legend is alive and well. I must also say that within this literature there is also a very strong survivalist thrust, as if by clinging to the Legend and living it out in a graduate/professional context rather than in an undergraduate context, education units would not only survive but gain in status within the university.

Thus, the Great Teacher Education Legend survives—primarily intact. I do not for one moment doubt that it not only can continue to survive, but perhaps eventually it will return to its original version if the teacher education function of education units are in the early stages of extinction, as well they might be. I believe that there are technical skills that teachers can acquire and I believe that when teachers acquire and use them students learn more and like it better. I believe further that the efficacy of these skills is becoming better recognized in the schools and that the need for training in them will not diminish—the need will be fulfilled. Already, national associations, state agencies, teacher organizations, and local districts are consistently ahead of teacher education institutions when it comes to technical skills training.

I am less sure about why the Great Teacher Education Legend has not faced more formidable opposition within university-based teacher education circles and from those who provide support and direction for university programs. Unless teacher education adopts a skill focus as its primary orientation, it cannot hope to justify its continued existence. If you train a preservice teacher well and specifically, you are likely not only to get an immediately measurable effect, you also are likely to see the skills used in the workplace. If you prepare preservice teachers generally or liberally, don't expect to be able to show that teacher education has an effect; not because the effect is hidden or not amenable to measurement, but instead because *there is no effect*. If there are not specific technical skills that require training to mastery for beginning or minimally safe, competent teaching in the workplace, then teacher education in the sense we have known it does become superfluous.

There might be several legitimate arguments made to sustain the Legend and to dispute the university-based technical skills rationale. One argument is that education professors simply can't or won't be able to technically train preservice teachers. After all, the research literature to which I referred earlier isn't hidden somewhere in an inaccessible vault. There has been no rush among teacher educators to rearrange their programs in order to train their majors in pedagogical skills.

A second argument might be that such training could be done in the university. However, it would take too much time and money to do so, especially when considered against our tradition of training teachers on-the-cheap.

A third argument, closely related to the first, is that the university is the wrong place to prepare teachers, especially if one considers such preparation as a professional skill acquisition endeavor. This argument has been advanced seriously from time to time (Haberman, 1971) and has been analyzed quite thoroughly for our own subject matter recently by Locke and Dodds (1984). I commend their detailed analysis to you and share with you part of their conclusion:

> We are stuck in the wrong place, doing ineffectual things to the wrong people at the wrong time in their cycle of personal and professional development. Society would be best served if physical educators could, like true professionals, be given autonomy and held truly accountable. But that cannot happen until preservice preparation is enormously upgraded—which can't happen until a professional culture demonstrably exists (Howsam, 1980). School and university are locked in a closed circle. (Locke and Dodds, 1984, p. 29)

But, if the university is not the right place to prepare teachers in any technical/professional sense, it clearly is the place to educate them liberally and also to provide them subject matter competence. Thus, current contingencies appear unable to support a major technical training movement in university-based teacher education. Should such a movement fail to develop, the professional preparation of teachers may eventually move out of the university and into the schools.

For all of these reasons and perhaps for many more, the Great Teacher Education Legend survives and flourishes. There is one other possible explanation for its persistence, a serious analysis worthy of our serious attention even though few might endorse it. This explanation would argue that the Great Teacher Education Legend is part of a system of education and teacher education, the major purpose of which is to maintain the basic class structures of the society and particularly to ensure that boys and girls from lower classes do not have easy access through education to economic and social opportunity. This argument, which has been made for schooling by Colin Greer (1972) is directly opposite to our traditional vision of the public school as an egalitarian vehicle through which to promote economic and social mobility.

Greer (1972) argued that schooling in America has enforced class structures rather than reducing them. He argued that a major function of schools until World War II was to weed out students from low income, ethnic, and minority districts and shuttle them into the unskilled labor market. Part of the American Dream is that educational advancement leads to social and economic advancement. Greer argued that the opposite has been more likely true and that schools have actually played a role that is 180 degrees different than the role espoused in our rhetoric.

Education has been a universal right in this country for almost 100 years. However, it was universal first in theory, then in law, and only much later in practice. States rarely enforced attendance laws and school dropouts were the norm rather than exception. This all changed when the unskilled labor market began to vanish after the depression and World War II. For the first time, then, schools began to have to deal with low income and minority students throughout their years in school, and it seems clear that schools have not been successful in doing so.

A liberal arts approach to teacher education is probably adequate if you are going to teach English, history, mathematics, or French to students in a prep school or a country day school. It is even marginally adequate if your teaching role is in a suburban high school where students may be more educationally advantaged, and more academically motivated. Reasonably educated persons have always been able to teach bright, motivated students, and therein lies part of the proof for the Great Teacher Education Legend.

If the prevailing class structures in this country are to be perpetuated or perhaps even widened through the mechanism of schooling, then it at least can be argued that a liberal-arts-as-professional-preparation model is appropriate to *that* task. On the other hand, if schools are to play a central role in the realization of the American Dream for all students, as our rhetoric has suggested, then the Great Teacher Education Legend will have to be put aside.

No one here needs be told that the current conditions for professional practice in schools have changed dramatically. There is less help from the home. Students who are poor performers or disruptive cannot be eliminated in ways they used to be. Standards are much more difficult to enforce. There is more to teach, to more different students, in considerably more difficult contexts than even two to three generations ago. At no time in our history have we more badly needed a generation of committed, technically competent teachers to move into the job market. Technical competence in the skills of management and instruction is, for most education contexts, prerequisite to even getting to teach the subject matter.

Of course, subject matter preparation is important! Many newly certified physical education teachers don't have the foggiest notion of how to develop, implement, and teach a quality program for children. Small wonder, when they are likely to have had more academic hours in educational foundations than in courses related specifically to the content of elementary physical education and when we have asked them in the same preparation to become budding sport scientists and philosopher/historians to boot!

Curricular time is the major issue here. Subject matter preparation is important, but it also ought to be recognized that how much physical education preparation contributes to teaching effectiveness is determined by the level at which the teacher works and the nature of the students taught. In our own field, we have further exacerbated the content problem by being unable or unwilling to come to grips with a basic definition of our subject matter. Given that internecine warfare, it is not surprising that there is so little time devoted to the main agenda, learning how to teach effectively.

Teaching skills and the commitment to utilize them should form the central focus of the professional aspects of teacher education, in terms of both credit hours and resources. If the curriculum cannot accommodate all that is asked of it, then other areas should be reduced or eliminated. These represent hard choices with consequences that go beyond teacher preparation. I have no doubt that we can continue to accommodate the liberal arts advocates, the educational foundations advocates, and the physical education discipline advocates. In one sense, it would be easier to do so than to really train undergraduates well. We might advocate "extending" the professional program. We might advocate post-baccalaureate programs. And, there is always the Great Teacher Education Legend with which to rationalize such changes.

But, what will we say to teachers in service? What will we say to teachers in training? What will we say to all those who know that the Legend is now just a legend? Understanding effective school practices and effective teaching strategies, how can we continue to ignore them in our preparation programs? How can we avoid making these skills and strategies—knowing about them and knowing how to do them—the main agenda for professional preparation? I do not know the answers to these questions, but feel sadly confident that answers for them will be found, and, in so doing, a tale will be concocted that will make the Great Teacher Education Legend seem like a child's riddle. That will be a tale!

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Beyond Pedagogy

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After many weeks of work on this paper, including numerous re-readings of the charge given to today's speakers, I came to the conclusion that I would not be able to satisfy the charge. Even so, there was much I felt needed to be said from the point of view of a practicing teacher. I ask your forbearance and shall plunge ahead with the hope that what I say does not turn out to be another book on turtles.

I'm referring to the young lad who peered at the librarian over the circulation desk and asked for a book on turtles. She produced a lovely volume for him and he took it away, only to return very shortly and hand it back. To her query, he replied, "This book has more about turtles than I want to know."

The original title given me is Job Skills: Beyond Pedagogy (administrative tasks, conferencing skills, etc.). There is so much more to being a teacher than pedagogy and other job skills. I will cover some skills and then I will launch into the etcetera, which opens the whole world of public elementary education. My remarks will cover some of the skills, attitudes, and understandings which lie between pedagogy and feelings of satisfaction as a teacher.

Table 1 shows the areas that I expect to cover and the four parts of the assignment given. I'm going to deal globally with the four parts. The contribution of the content I will be discussing is to the survival of the teacher in the educational setting. You are going to have to determine its place in the professional preparation program.

Regarding arguments for including certain coursework in a professional preparation program: I don't often shy away from pro and con presentations, but the last time I did so for the sake of clarity and enlightenment, I was firmly on the pro side, and the recipients not only decided for the con, but used all the arguments I had given them. They did not even give me the courtesy of coming up with one new argument! I believe that what I have to say is important. I may give you arguments for including coursework, but I will most certainly not give you arguments against it, with the one exception of the great cop-out, current practice, "It's always been done this way."

My time for the better part of the past twenty years has been spent in the elementary schools and my energies have been expended in trying to learn to teach in ways that I was not taught and in trying to understand what was happening. I have had to figure out things for which I was not prepared, many of them factors that have discouraged others to the point that they have left teaching. I have been away from professional preparation too long. I'm not sure how to conduct a course containing this content. I do know that the purpose of teaching it is, purely and simply, the survival of teachers. I also am not sure how content should be taught to meet the needs of the elementary physical educator. You will have to figure this out for yourselves.

I did my scholarly part in the library. I've photocopied the appropriate articles and read them carefully. But I didn't learn much and the slant wasn't quite right. I finally realized that outsiders were examining microscopic bits of a whole they did not fully understand and could not until they had lived with it for a very long time. We need this examination, but at least let us do it in partnership with one another. I also realized that you asked a public school teacher to speak, not to do what any library researcher could have done, but rather for the unique perspectives that might bring new ways of looking at elementary teaching. Here, then, are my perspectives.

Table 1.

The assignment:

1) Contribution of content area to professional preparation program
2) Arguments pro and con
3) Conduct of course containing content for what purposes?
4) How content will be taught to meet needs of EPE

The approach:

Skills

1. Administration
2. Conferencing
3. Curriculum planning
4. IMs and PGs
5. Healthful lifestyle
6. Individual help
7. Public relations

Attitudes:

1. Professional
2. Positive
3. Future voters
4. See children/ individuals
5. Appreciation young
6. Competition
7. Admit mistakes

Understandings:

1. Professional isolation
2. The hardest job
3. Greatest opportunity
4. Behavioral objectives
5. Accountability
6. Political realities
7. It doesn't matter
8. Unknown wilderness

Rest of charge

SKILLS

Administrative Tasks

The principal administrative jobs are scheduling, budgeting, and ordering equipment. It is the responsibility of the principal to prepare a building schedule and see that it is fair to all concerned. Unfortunately, many principals have neither an interest in nor an aptitude for making out schedules. But the major problem in schedule-making occurs when the principal has not been an elementary specialist, for then he/she has no appreciation for the tremendous effect the schedule has on the specialists' lives.

When we teach at the university level, we frequently work with schedules that are less than we hoped. But they only last for a term. And within that schedule, we still have a lot of flexibility, at least until we allow ourselves to get overloaded. It's different at the elementary school. The schedule lasts for 36 full weeks—almost ten months. And there is practically no free time in that schedule and very little flexibility. If the schedule is poor, we are locked in for one entire, not so professional, year. When we have a kindergarten class between two sixth grades, followed with second, then fifth and so on, it is difficult to give our best. When classes are not blocked together so that we can plan equipment changes, it is difficult. When our classes are run together so that one group is waiting at the door while we try to bring sensible closure to the other group after Suzy just tripped Ryan and his eyeglasses broke when he fell, it is difficult. Most elementary specialists could go on and on about the problems and horrors of poor schedules. Suffice it to say that there is little flexibility and no escape. Like the students who don't want to be there, teachers also are prisoners for the remainder of the school year.

There are ways to avoid poor scheduling. I have found some principals who are willing to accept help with the total school schedule if that help is offered quietly and if the teacher keeps quiet about it afterwards. I tell them that I enjoy working out schedules as much as I enjoy jigsaw puzzles (and I do). When the principal is not receptive to this kind of help, at least we can plan our own most desirable schedule, have reasons ready for our requests, and take time to explain these to the principal before the schedule is made. Knowledge of how to schedule should be a basic someplace in the undergraduate curriculum. Let us not, as with the principals' preparation, leave it to chance.

Budgeting for equipment is not always an option for the teacher. Usually, the teacher is informed about the amount available. After assessing the equipment on hand and needed, it is the job of the teacher to let the administrator know what is needed and why. Failure to communicate why is probably the single greatest cause of underequipped programs. Perhaps there won't be results the first year, or even the second, but courteous persistence and optimum utilization of what is available frequently will secure the results. Once money is available, knowledge of how to prioritize is essential. It is ridiculous to purchase an item for one time use when there are greater needs.

Teachers should be aware of the fiscal calendar. In different school settings, I have secured extra equipment by having the right information on ordering when someone calls and says "I have $200 or $300 that has to be spent in the next thirty days. Do you need anything?"

The skills of ordering equipment must not be overlooked. Equipment, catalogues, and companies need to be evaluated. It may cost less to order from one company, but if half the balls won't hold air, will they take them back? You need service as well as price. Also, if the bill must be paid in 25 days, you want delivery next Monday along with the bill. Once the bill is in, see if there is any politic way to get it paid immediately.

The care of equipment is also an essential skill, but some of that should be included in curriculum content, because we must teach our children to care for equipment. If it isn't in the school curriculum, it should be. Teaching children to care for equipment can mean a threefold increase in the amount of equipment available at any one time.

Conferencing Skills

Conferences can be classified as formal and informal and as those held with students, parents, and professionals. As much as possible, we need to know ahead of time what is to be said at a conference. If there are doubts about the suitability of subjects, check it out! I don't need to tell you what the conferencing skills are, only that they are important to beginning teachers. Professional students need practice in conferencing. They should be asked to outline areas to be covered with hypothetical and real cases and to write sample openings for conferences. They need this exposure for conferences with all three groups and probably with the press. We never know when talking with the press is a likelihood and nothing happens easier than foot in mouth in publication—nor is there anything more devastating. Mock conferences should be held and evaluated. Perhaps the most important conferences of all are those with the principal and the personnel director. These conferences will determine job securement, job retention, and, to a great extent, job satisfaction.

Physical educators have many opportunities to counsel students informally. They need to know how to handle these situations and to keep principals and classroom teachers informed. Whether they like it or not, physical educators will be dealing with personal and family problems that children bring to school in increasing numbers and complexity. Teachers must be prepared to respond to changes in children, both of the moment and changes resulting from maturation.

Just as we teach children that when they leave school or talk to visitors, they represent themselves, their parents, and their school, we also need to help prospective teachers understand that they represent themselves, their principal and fellow teachers, and their school district. There is merit in the term "best foot forward." I am not saying that everyone should cover-up, but the general public does not need to know every little thing that goes wrong in school and teachers need to know this. Ethical behavior should extend to the teachers' lounge. Gossip is not just a time-waster, it is fuel for the fires of envy and soil for the seeds of discontent.

Curriculum Planning

Those of you who know me well, know how dear to my heart is the process of "Messing About." What a marvelous concept David Hawkins (1965) has given us. I believe our professional students need to study a lot of theory about curriculum planning, but along with that theory they need experience operating as a curriculum committee. They need the understanding that curriculum is "messy, man, messy." It is not linear and neatly progressive. It is plain and simply messy. Personally, I believe that prospective teachers need to understand that most planning is messy and they should know that it is both legitimate and essential to mess about in their planning and in their teaching. Not mess around—mess about. Planning and teaching are not easy. Why should we make it more difficult by pretending that it is organized and linear and proceeds in outline form. That's balogna, and they need to know it.

Curriculum work is a skill. It involves give and take with people and the art of compromise. Workers need the ability to look for common ground, wherever that may be, because common ground is probably the best place to start developing a curriculum. Patience is essential in curriculum work, and impatience is counterproductive. Finding that common ground can take hours, days, and many meetings but failure to find it will result in an inferior product or no document. Leadership in curriculum must strike a balance. Too little direction results in much wasted time. Too much direction will get the job done but commitment and allegiance to the plan will be missing.

Organization And Supervision of Intramurals And Playgrounds

Responsibilities, possibilities, and techniques of organizing and supervising intramural activities should be an essential of undergraduate preparation for the elementary physical educator. Appropriate activities need to be discussed as well as appropriate behaviors of teachers conducting out-of-class activities. In addition, there probably isn't anyone in the school who can contribute as much to the playground as the physical educator. First, we have a responsibility to teach in our classes playground activities for each age level and appropriate playground behaviors. Our majors must be prepared to do this. Further, this is one area that should involve close cooperation between classroom teachers and physical educators.

Second, the design of the playground frequently falls to the physical educator by default. No one else knows what to do so they turn to the physical educator. If you believe as I do, that the time spent on the playground is an important part of each child's school day, then you will agree the playgrounds need to be designed accordingly. Our majors need to be prepared to meet the challenges of both design and supervision.

Establishing A Healthful Lifestyle

Using the words of the financiers, young professionals need to learn to "pay yourself first." In public schools, equipment and facilities are not as convenient to use as on college campuses, if for no other reason than that they are constantly in use by others, mainly public school students and the general community. Also, there is constant pressure on the physical educator to serve as organizer, sponsor, and promoter of recreational activities rather than to participate. For their own welfare, physical educators must schedule time for their own physical activities and guard it jealously.

It is appalling how much the elementary school drains the teacher. Good nutrition and adequate rest are important to all teachers. Having been both a classroom teacher and a physical educator, I know the latter is more demanding of physical, mental, and emotional energies. Many of us readily admit that lack of good sleep Sunday night means difficult children most of the next week. Children must have built-in sensors which home on teachers' lack of sleep and some of them have automatic, unstoppable, poor behavior as a natural reaction. If, on the other hand, we are relaxed and rested on Monday mornings and get plenty of sleep through the week, things go much better.

Individual Help

Every teacher has students who need extra help. But when it comes to identifying the children who need help, physical educators have not been as well prepared. Ask an elementary teacher if he or she has second graders who cannot skip. Nine out of ten will tell you "no." Then, watch the class. The key is to watch each child separately. More often than not, you will find several who cannot skip, much to the amazement of their teacher.

Children will benefit from extra help with motor skills just as they do with other academic skills. And the earlier the intervention, the less time and effort is needed to get results. The kind of problems with motor development that we can alleviate or correct can be spotted in kindergarten. If they have not been recognized by the end of first grade, we are failing the children.

I am not in the least opposed to providing extra help for intermediate children who need it. I frequently work with intermediate level children on skills such as throwing, catching, or guarding a goal. However, the same amount of time spent with primary children will bring far better results and can prevent those children from becoming physical education and playground dropouts. Of course there will be exceptions, but prospective teachers need to know that if they have to fight for time in their schedules to work with individuals, the younger the child, the more effective that help will be.

Following identification, what do we do then? How do we go about getting help for the children? How do we approach parents? "Your child is flunking gym?" I've had two sets of parents tell me that their children had negative feelings about failing physical education and they did not want to have extra gym. In both cases, it turned out that the parents had the negative feelings and by the end of a month the children knew they had a very special program that every student in class envied. If I go into a classroom to pick up a group for extra help and one child is absent, every child in the class will volunteer to take the absentee's place.

From the little I know of professional preparation programs today, it seems that we are probably doing an adequate job of teaching students how to work with children that need extra help. I certainly hope so, because the work not only is essential, it is highly rewarding.

Programs And Public Relations

I don't remember being told how important PTA and other display-type programs are to the elementary specialist, but they can make or break a teacher. Poor teachers can be forgiven a lot if they can put on a smashing program, and excellent teachers will suffer if they don't come through. The whys, hows, and wherefors of organizing such programs must not be foreign to beginning teachers. Techniques for utilizing class material, for planning and working with children, for getting the best from them, for dealing with poor rehearsals, for choosing student groups, and for seeing that all children have opportunities to perform are all essential. Most of these skills are assumed but many are frequently absent. Can we say we are preparing teachers if we ignore this job skill?

An extremely important part of public relations is keeping records and developing statistics. It takes precious time, but the rewards can be great. Teachers need to choose a few skills important to children and to themselves, find a way to give standard scores on these, and take the time to keep accurate records over several years. I have never been a big fan of testing, believing that teaching was far more important. However, four years ago when we started the Intensive Physical Education for Primary Students (IPEPS) program, I realized the necessity for both testing and record-keeping. Perhaps we tested too much, but when the program was in full swing, I met the kindergarteners every day the first semester and four or five days the second. First, second, and third graders had physical education three times each week and selected students had four periods per week. At the end of three years, we had statistics showing the benefits of the IPEPS program. At that time, the state of Ohio changed its standards to 200 minutes per week of art, music, and physical education for all elementary children. Our intermediate classes were in compliance but our primary children only had 150 minutes total, including 60 minutes of physical education. Because of the success of IPEPS and particularly because of the statistics, our Principal, Jean Sylak, was able to convince the other principals to extend physical education to 90 minutes per week—a full thirty minute extension. Music was extended 10 minutes and art 10 minutes. Without those statistics, the missing 50 minutes would undoubtedly have been divided more evenly.

Teachers do not need large amounts of statistics to make their case, but the fitness tests are not enough. We need to show growth in skills and abilities that are important to the child and see that they are important to the parent.

A few weeks ago a parent of a new student came to me. She could not believe that her first grader had learned to turn a forward roll over a bar three feet high. "She is so unathletic" was the mother's comment. A few days later the daughter had a chance to show the new skill to her mother, who was delighted. Fortunately, the mother was receptive to new ideas. She took literature home, read it thoroughly, came back and said "I've done everything wrong!" She has completely revised her opinions on her two children and is working to allow them much more freedom. Previously, she "had no idea!" This is public relations, and it was aided by other satisfied mothers encouraging the newcomer to our community.

ATTITUDES

Professional

Several years ago, a colleague described what happened when one of the old guard on their faculty no longer taught freshmen majors. She said that upperclassmen did not have that professional attitude that the retiree had been able to instill in the underclassmen. What makes the difference, I'm not sure, but I am very sure that whatever it is, it needs to be cultivated and carefully propogated.

I shall always be grateful to the tremendous faculty at Ohio State that I was privileged to learn from. They made sure that we understood that we were professionals, receiving a professional education. Not training, friends, education. Dogs are trained; professionals are educated. We understood that we were to behave as professionals. I was never more grateful for this than during a heated discussion with a principal in Connecticut. I happened to be chair of the salary committee and he (management) thought teachers (labor) should be satisfied with things as they were. I was able to stand up to this because I understood that I was a professional and that regardless of what he said or did I intended to remain a professional in attitude, thinking, and actions. Friends, there is no substitute for the professional attitude. I do not know how to instill it. I only know that it must be a part of undergraduate preparation.

Positive

Teachers need to have a positive outlook. Negativism has little part in schooling. We are dealing with the future and if there is no hope out there, we might as well save our efforts. Optimism may be all we have going for us, but we better at least have that.

Future Voters

We are educating future voters and we don't want to lose one vote. We must look at our children and youth as potential voters, because they are. We have lost too many of them in the past. We cannot afford to continue doing that. If our students were going to vote next month on school finances, some of us would teach differently.

I know that "fun" as an objective has not recently been in favor, but enjoyment of classes and learning ought to be a high priority of every teacher. When I taught science to fifth graders, I found a good portion of the students coming in the fall with negative attitudes toward science. But science can be fun. Students get to do and learn, go and find out, experiment and try, and to think through. Science is a marvelous subject—almost as good as physical education. I made no bones about enjoyment being a first priority. It was important that those students would enter sixth grade looking forward to their science classes. And I'm not going to apologize for it. In fact, if every teacher would teach with that in mind, schools would not fail our children so badly and so often. Enjoyment of physical education is a first priority of all my teaching. But that does not mean we don' work. Nor does it mean fun over discipline. Work can be fun and should be rewarding and enjoyable.

Seeing Children As Individuals

I recognize that seeing children as individuals is a part of pedagogy, but it's too important to leave out of attitudes. All teachers must assume an attitude that they are not just teaching groups or skills. They are teaching individuals in a group setting and their primary responsibility is to help each individual progress in skill acquisition.

Appreciation of Young Children

I once had a shouting match with a principal because he wouldn't let me teach second grade. I had to ask if he wanted me to take a leave of absence and do student teaching in that grade. I won the point and the assignment, but you know, he had been right, I was wrong. I was not suited at that time for second grade and the summer following I found out why. Jay Yanoff, in an extensive workshop on learning disabilities made the statement that hyperactive teachers make hyperactive students—and I saw it all.

I had been great for fifth grade and good for fourth. I would come in the morning with excitement and enthusiasm for the day's activities and the children responded beautifully. But second graders don't need that. They were off the walls. Primary children do not need enthusiasm from the teacher. They do need appreciation. They need someone to appreciate that they are there, to appreciate what they are doing, and to share their joy in accomplishments. They supply their own enthusiasm. Schools deny it, insisting that they conform, so that in several years it becomes necessary for teachers to supply the enthusiasm.

Research on enthusiasm in teachers points out that training teachers to be enthusiastic did not seem to make as much difference in the primary grades. Of course it doesn't. We need to think through the purposes and uses of enthusiasm and why we need it. Children don't naturally hate school or turn it off, nor are they naturally bored. We teach them that—surely and inexorably. They come to school needing appreciation. It would be interesting to study the differing effects of both appreciation and enthusiasm on all ages of students. Vera Johnston, NASPE's most recent Joy of Effort recipient, gives learning to feel and show love and empathy to young children a very high priority. This is the appreciation youngsters need.

Competition

We are very good at teaching children to compete. Teaching them to cooperate is the greater challenge and the more desirable. Many of our students would rather deprive others and themselves of rewards than allow others to receive any awards (Campbell, 1974). How can we expect these students to get a job and suddenly turn off their competitive natures in order to cooperate with others to get necessary jobs done? If you don't agree with this point of view, let's at least avoid overemphasis on competition. The subject deserves greater study and research.

Ability To Admit Mistakes

The attitude that we must be right permeates our schools. Neither teachers nor administrators are immune to this attitude, the only difference being that administrators know that teachers can be wrong and teachers know the same about administrators but both groups tend to hide this from students. Where are students going to learn appropriate behaviors to use when they goof, if all significant adults cover up every mistake? We have to be willing to say to a child or a class "For crying out loud, did I ever goof!" or "Look what I have done. What shall I do now to help the situation?" We get unhappy with students who cannot admit they goofed but how long has it been since a teacher publicly admitted a mistake or failure and displayed appropriate modeling behavior?

KNOWLEDGES AND UNDERSTANDINGS: REALITIES OF LIFE IN PUBLIC ELEMENTARY SCHOOLS

Professional Isolation

The first reality of life in the public elementary school is that elementary special-area teachers are professionally isolated from specific professional contacts. Second grade teachers can converse with other second grade teachers and also with first and third grade teachers and they all have a pretty good idea of what is going on and what should be going on. Most elementary teachers and principals can carry on meaningful professional dialogue with each other. The elementary specialists are not so fortunate. They can discuss general educational issues and practices and children, but their growth in physical education is not so easily stimulated. Physical educators can go for days, months, even years without seeing another kindred soul.

The isolation is compounded by the absence of meaningful supervision. In some 20 years of public school teaching, I have worked with 20 different principals and only two of these were able to give me meaningful feedback about teaching physical education. Those two individuals know a great deal about teaching and feel secure enough to examine the teaching process in different settings. Happily, one of those is my present principal. Most principals are content to leave you alone. This gives teachers enormous degrees of freedom in teaching and subject matter but this freedom leaves them without a major avenue for professional growth. (Mancini, Wuest, Vantine, and Clark, 1984). Winget (personal communication, June 1984) has pointed out that because principals do not understand physical education, they tend to evaluate on aspects they do understand. They evaluate promptness, lesson plan deadlines, control, neatness of equipment, bus, lunch and detention duties, and general professional demeanor. The recent trend toward eliminating subject area coordinators has eliminated another elementary supervisory avenue.

Suppose that you went to work every morning in the department of elementary education, that you worked with students all day long, that you never saw another physical educator on the job for the entire year, and that your immediate superior was a social studies specialist. I know some of you are thinking how nice that would be. But would it be so nice if you were young and eager to share thoughts and ideas? Would it be as nice the second year? Would you want to look toward an entire professional life spent in this way? Remember, that during the day you can't even reach anyone by telephone, because if you happen to squeeze out a few minutes, the receiving party will not have time to talk to you.

The isolation of the elementary specialist is real and is damaging to the professional growth of teachers. Prospective teachers must have knowledge of this before they go out, and should have already thought out several strategies to overcome such isolation.

The Hardest Job

Every teacher thinks her or his job is very difficult and no one wants to admit that someone else may have to work harder. I have taught in the gymnasium and the classroom, and kindergarten through college, and there is no doubt in my mind that conscientious teachers who work *with young moving* bodies are forced to give more of themselves than any other group with the possible exception of kindergarten and preschool teachers.

The elementary gymnasium contains constant movement. My eyes don't get tired but believe me, there is maximum sensory input. Did you know that children have a direct connection between their feet and their mouths, and that the faster they go, the louder they will be? This is a natural phenomenon that teacher and students must constantly work to overcome. Noise, creative exuberance, and unpredictable bodies and personalities combine to force the elementary physical educator to stay on constant alert. Perhaps a more appropriate simile would be that these teachers pass through alert, combat readiness, actual battle, and back to alert without any intervening rest and relaxation.

On top of this, teachers have their own agendas for accomplishment and their almost constant concern for interpersonal relationships and feelings. Another factor is that every thirty minutes a new group arrives with totally different bodies, movement patterns, relationships, attitudes, and personalities. Not only are the bodies and personalities moving, but they operate in a large space that often has one of two conditions; either the space is filled with as many pieces of equipment as there are children (each piece moving independently of every other) or the entire room contains equipment that any court in the land would classify as an extremely attractive nuisance. These factors combine to produce a total drain of a teacher's resources—by late morning of every day. But don't ask any other teacher to admit our job is harder. They won't do it.

The Greatest Opportunity

Physical education of the young presents the greatest opportunity available in our public schools for individual growth of young students. I believe that physical education is one of the two most important subject areas in elementary schools. The other is reading, and mathematics is not far behind.

The importance of physical education is in inverse proportion to age. The younger the child, the more important physical education is. When children come to kindergarten, many of them are completely devoid of any comparative sense. Their egocentricity and their lack of awareness of what others are doing means that they don't realize their skills are not as good as others. Most children entering first grade have a well-developed sense of comparison (for better or worse) and almost all of them have this before they leave first grade. They react to the stimuli of school and playground in a number of ways including identifying, attempting to fit in, enjoying, competing, and withdrawing. It is important that we work with children with less developed skills before they do too much comparing and begin to withdraw. Because physical skills are more visible (there is no place to hide in a gymnasium) and because playground, gymnasium, and neighborhoods operate around a base of physical skills, learning these skills becomes of prime importance to most children. When you find a physical education/playground drop-out, you usually have a child who should have had more physical education in kindergarten and first grade. Many of the poor skills of kindergarteners result from lack of exposure, opportunity, and experience. Daily physical education and extra periods for those who need them, help kindergarteners with poor skills narrow the gap between them and the highly skilled, at a time when it otherwise would become more pronounced.

The greatest potential should bring the greatest challenge and the greatest responsibility. However, because physical education is not allowed to fulfill its potential, it usually brings frustration instead.

Behavioral Objectives And Bankruptcy

For the following, I am indebted to Linda Fischer-Packales of Cleveland State (personal communication, June 1984). We were discussing "moving about" and she had just read Hawkins article "Messing About in Science" (1965). She said that people who teach people find themselves personally bankrupt. But it's worse when they try to meet behavioral objectives and still try to be a humanist. It's all outgo with no return. When we have to teach people and also teach so many specific skills, it is all going out; there is nothing coming back. When we can't mess about with our teaching, there's no time for interpersonal reactions and relationships that give us some returns and help to restore our balance. Acute bankruptcy occurs when a teacher tries to teach other systems. It can be restored with messing about in teaching and with the relaxing of the agenda. If we can't mess about, if we're always in a square or a cube of someone else's design, what do we get back? There is nothing that satisfies the soul.

Accountability

Accountability is for ourselves, not the children. One of the most far-reaching shams perpetrated on the public schools is that teachers should be accountable for children's progress. This concept, borrowed from industry that deals with physical things moving through mechanical steps until they result in specific predictable products, is not and should not be applicable to children or to education. Until recently I could not understand how educators could be led down this path. But superintendents must anticipate public reaction and have allowed accountability in the schools in order to satisfy the public. Teachers have had it imposed on them but it is time to rear our professional heads and say "Whoa!" No other segment of society is asked to be accountable for the behavior and progress of a group of people about whom they have no choice in the selection and no chance for rejection and for whom they have little to say about the curriculum. Doctors and lawyers see their clients one at a time, and after the initial visit they either agree to work with them or refer them to someone else. They don't take groups of clients, some of whom feel like prisoners. When I am permitted to pre-interview my clients, to accept or reject, to schedule them in groups of three or five or 25 as I wish, to say what will be taught and what will be accomplished, to move and remove clients who do not work well in their groups, then I will be willing to be accountable for their progress, not before.

Accountability can be and should be assumed by individual professionals. I *am* willing to be accountable for myself as a professional with all that implies. I will be accountable for a professional job of preparing for my teaching, for the professional conduct of my classes, a professional manner, and for exercising my best professional judgment. For these I have been well educated. To ask more of me is to relegate me to the factory of education and to deny my professionalism. I'm not willing to give it up!

Political Realities

The political realities of education as an occupation require some sophistication to recognize, more to understand, and a tremendous amount to utilize. The first political reality is to recognize who is in charge. In most communities today, it is the public. We have three groups of clients; those who receive our services (our students), the parents of our students, and other taxpayers. We tend to think of our clients as students and forget the two groups that pay the bills. We don't dare ignore any group. In more communities every year, the taxpayers without children exceed those with children in school. If nothing else, this has great implications for outreach and public relations. The large, elder group is being invited into our schools, not only because parents no longer have time to give and retirees do, but because there is no better way to inform the volunteers about the schools' programs. Many schools are not afraid to let the public see what is going on. We believe in the process of public education as we carry it out, and we want an informed group of voters.

The second political reality is that schools operate as a bureaucracy rather than as a professional institution. Brubaker and Nelson (1974) have made this distinction rather nicely:

Professional Model	**Bureaucratic Model**
Make decision	Anticipate public reaction
Implement decision	Make decision
Deal with public reaction	Implement decision

We might add a fourth step to the bureaucratic model—that of adjusting or responding further to public reaction.

Public schools must be responsive to the public. In most states, they must be responsive to those who pay the bills and make the decisions regarding the availability of funds. While the bureaucratic model might be appropriate for the management of public schools, it frequently is not appropriate for curriculum development and instructional decision making.

The third political reality has to do with the power of a superintendent. Once a board hires a superintendent, they have a vested interest in his or her doing well or appearing to do well. Technically, the board is over the superintendent but an astute superintendent will immediately turn that around and control the board. The board will place enormous trust in their choice and will do everything possible to help the superintendent succeed. Superintendents who cannot control boards tend to move on quickly.

Another view of this relationship would be that the superintendent only has to keep five people happy on Ohio school boards—satisfied that he or she is doing as well as possible under the circumstances. This should be easier than with a large corporation. The chief executive officer of a corporation has to satisfy people who are more knowledgeable and sharp about the business than lay public are about running schools. And, of course, the board members of a corporation have much more to protect than their reputations—their financial futures are frequently tied into the corporation. We must recognize that in some communities the board does control the superintendent but I suspect that in many cases that superintendent just doesn't know how to play the game—yet.

The power of the superintendent is passed along to the principal. Within the building, the principal might as well be queen or king. Teachers need to understand the dynamics of our still largely paternalistic elementary schools. The amount of power available to or assumed by the principal is in inverse proportion to the age of the students. Secondary school principals have less power to change things by themselves for one very simple reason. High school teachers won't take too much from principals—or anyone else for that matter. However, elementary teachers will, and because they will they get dumped upon.

This brings us to the fourth political reality, that is, the lack of assertiveness of elementary teachers. When I first went into the elementary school, I had had two years of high school experience, seven years of university teaching, plus two years of graduate school. This was back in the days when most men's and women's departments were separate. Most of my contact (thank goodness not all) had been with women. Now, there is nothing shy about college women physical educators. They had chosen an occupation, they had fought their way through graduate school, and most had been on sports teams when it was not as socially acceptable as today. These women were assertive before that term came into common use, and some of them were downright agressive.

At the other end of the assertiveness scale, we find elementary teachers. They tend to be very dedicated to their children and to their work. However, they also tend to adjust to the conditions they find themselves in and not make waves, or even ripples, and they tend to do as they are told. If they are asked instead of told they will do practically anything. Discussing this with colleagues, I have been told that preschool teachers are even less assertive!

When you combine the mental attitude of many elementary teachers with the structure of public schools, it is not a pretty picture. It is compounded by the small size of many elementary buildings which permits close supervision of a small group of teachers by one principal. Is it any wonder that paternalism thrives in our public elementary schools? Paternalism then, becomes the fifth political reality that needs to be addressed.

The sixth political reality is to me the saddest. Elementary teachers are valued more for their bodies than for their minds. I learned very early in my elementary experience that the fact that I was a warm body controlling—hopefully teaching, but definitely controlling—a group of children for the specified time, was far more important than what I did with those children. We can be scheduled the same as facilities. We don't need breaks and why should we care in what order the classes are scheduled? Facilities don't care about those things. We are properties, round boxes that must be fit as well as possible into the rectangular holes of classroom doors. We are told this in so many wordless ways that even those of us who suppress it can't help but be affected by it. All too often this is the case. Teachers and facilities do not have to be treated much differently—although matching them together with a little care in the beginning saves many headaches for the principal.

It Doesn't Matter But It Does Matter

The first time I left the university scene for the elementary school, I was unprepared for a number of things, one of which was that the quality of the job I did did not matter. As long as I did a passable job, it made little difference to others how well I did. When teachers are commended, all of the teachers are commended. When teachers are "appreciated" (e.g., with an appreciation luncheon, dinner, or program), all of the teachers are appreciated (Kaiser, 1981). The neophyte and the veteran, the poor and the outstanding, the loving and the hateful are all treated the same. It doesn't matter. That's the point—it doesn't matter. I doesn't matter that you spilled your guts and the teacher next door hardly lifted a finger. It doesn't matter that you slid along with as little effort as possible while the teacher down the hall gave 150 percent. It simply doesn't matter because we are boxes, bodies to fill spaces.

The second time I moved from the university to the elementary school, I was far better prepared for this reality. I was not prepared for the fact that it did matter. All my good work and extra effort mattered a great deal—to fellow teachers. I was reprimanded more than once for doing too much. "The other teachers don't like it." "It makes them look bad." "Yes, we love the activities you're doing with the children but could you please ease up?"

I must say that this if far more apt to happen to classroom teachers or to secondary physical educators than to a lone specialist. Single specialists don't have to worry as much about the comparison factor; they are expected to have extra activities, but doing too much can be damaging to professional relationships.

The past Fall was my third move from university to elementary, and so far I have had no surprises.

The Unknown Wilderness

The public elementary schools are an unknown wilderness. Nothing that is written describes conditions as they exist. The climate is shadowy, nebulous, inarticulated. It is hidden, lurking, sometimes dormant. It is seldom discussed because educators tend to pretend that they have it all together. To admit that they don't is to open themselves to unknowns that may be worse. Some teachers face it—some don't recognize it exists. A few puzzle it out for themselves. A lot give up on that aspect, mistake or mislabel it, or miss it entirely. The problem is that the unknown wilderness does influence us, it works on all the teachers. No one knows how much it wears us down.

There is so much of a human aspect that cannot be measured or described. There is a meeting of so many personalities, and the climate changes from moment to moment. Personalities expressing themselves is probably in inverse proportion to the need for enthusiastic teaching. The human aspect is always there and can pop up positively and negatively.

The influence of parents is felt tremendously in the elementary schools. Part of our job description should be breaking in parents. Countless hours are spent explaining, encouraging, discouraging, and learning to live with parents. We have to operate with their perceptions of their children, our programs and abilities, and education in general.

The unknown wilderness has to do with dreams and rose-colored glasses. It has to do with expectations of good and failure to protect ourselves, to shield, to realize the truth. It also has to do with tales of intimidation and fear of transfer; involuntary transfer being the threat held over every elementary teacher's head. It has to do with unpopular assignments and abrupt changes, perhaps in the middle of the school year, things which happen to teachers who are out of favor with the powers that be.

Because of the structure of the public elementary schools and because of human nature, teachers are often treated more like students—mature, responsible, big, sixth graders—but still like students. Since teachers are inherently good students, they allow this to occur.

The elementary schools need a redirection with emphasis on what Dwyer (1980) refers to as a "liberation of the human potential of those who will work at liberating the human potential of others." This we do not have today.

I have painted a fairly bleak picture of life in our public elementary schools. I do not wish to leave you with the impression that all our schools typify all these conditions; they do not, but many do. Most will have one or more of these conditions. I happen to be very fortunate in my school district and I like what I'm doing. There's a lot right with our public elementary schools, but prospective teachers don't need innoculations against the good they will encounter.

The point I would like to make is that we cannot prepare elementary physical educators only for ideal positions. No matter how lovely a school system new teachers find themselves in, some of these foxes will be around to spoil their grapes. Are you going to prepare the prospective teacher for this or still leave it to chance?

THE REST OF MY TASK

I am getting back to the four charges given to the speakers with global comments. I have four suggestions to make to better prepare physical educators for life in elementary schools. The first is to find ways to refute or verify some of the assertions made today. We must have more sophisticated techniques for getting at things people don't want to talk about or haven't brought to their consciousness. It is obvious to me that research is needed in new directions.

The second suggestion has to do with more research on the needs of teachers and the sources of satisfaction on the job. Kaiser (1981; 1982) has explained teacher need using Maslow's need hierarchy and has explained job inducements by using Herzeberg's motivator-hygiene theory (see Figure 1). That the basic needs of teachers are not being met seems evident. We need to dig more deeply into the factors in public elementary education that prevent teachers from self-actualization and that keep them from the true motivators of recognition, achievement, responsibility, and advancement.

The third suggestion has to do with adding material (we're never asked to delete—just to add) on politics and survival in public elementary schools to teacher preparation programs. Humankind is supposed to be superior because we can build on the past. If these are the conditions found in our schools and if we refuse to address them or refuse to prepare our graduates to deal with them, then we must be prepared for more teacher dropouts, quicker teacher burnout, and greater numbers of zombies in our classrooms who don't know what hit them and don't know what they're fighting.

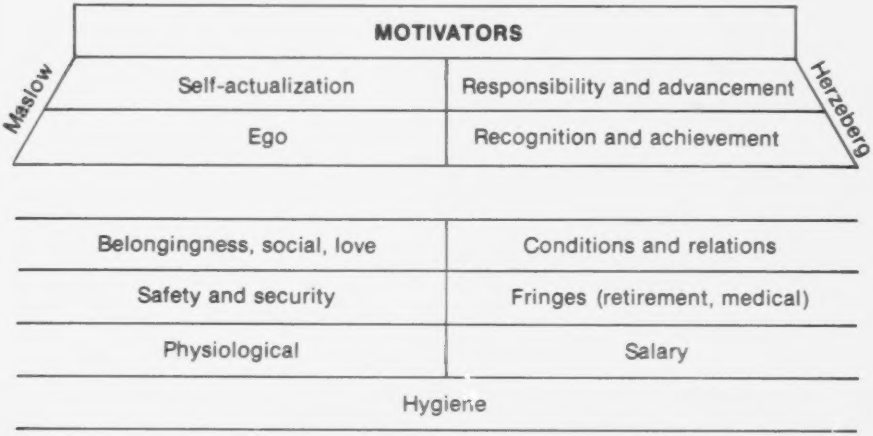
MOTIVATORS
Maslow
Herzeberg
Self-actualization
Responsibility and advancement
Ego
Recognition and achievement
Belongingness, social, love
Conditions and relations
Safety and security
Fringes (retirement, medical)
Physiological
Salary
Hygiene

Figure 1. Personal and Job-related Factors of Motivation

Source: *Kaiser, J. (1981). Motivation deprivation: no reason to stay.* Journal of Teacher Education. 32 *(5)*. 41-43.

My fourth suggestion is being implemented in many institutions. It is that education majors must be given more actual contacts with students of every age. I believe that this should occur in conjunction with studying the growth and development of the children of a specific age. Studying those children, observing those children, and working with those children should occur simultaneously with the study of appropriate curricular materials for that age. Instead of having separate courses for each of these areas, we ought to be studying everything about one small age group during one term. I believe that most professional students need far more hands-on experience with young children.

The fifth suggestion is not new. Those involved with professional preparation of elementary teachers must get into the elementary schools, should be given two year leaves to do it, and should have a constant, continuous relationship with a particular school and a particular group of children. I applaud those of you who keep working toward this end.

My sixth suggestion is not as difficult to implement because it does not require faculty review. It is, simply, an individual educational plan (IEP) for every advanced professional student. We talk a lot about individualization and providing IEPs is one more way to show our students that we do believe in individualization. It would not be so difficult to do a continuous computerized IEP for each advanced major. They need to know where they are, where they are going, and how they might get there. Getting such students in the habit of working with their own IEP could help them relieve some of the professional isolation. They could include in their IEP plans for working with a buddy, for periodic refreshers, and for calculated self study. IEPs could be a lot of work but if put on a computer, students could do most of the work. Hard copy could be kept periodically and students could take a disk of their program with them upon graduation. I can't think of any better way of saying to a graduate, "We expect you to continue to grow."

CONCLUDING COMMENT

Thank you for your attention. I appreciate the opportunity to focus my thinking, even though it has taken many weeks from my personal life. It has been good for me and I am well aware that even a turtle has to stick its neck out if it wants to get anyplace. Go for it!

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SECTION TWO

The Process of A Professional Preparation Program for Elementary School Physical Education Specialists

The focus of the second full day of the conference was the *process* of the professional preparation program. The assumption was that the content of a professional preparation program only partially contributes to the skills, attitudes, and knowledge of program graduates. The process is equally important.

Speakers addressed the hidden curriculum, developing commitment to teaching, the role of the student, field work and student teaching, and the integration and sequencing of program elements. Speakers were asked to address the knowledge base on the subject and to provide help to participants by drawing implications of this knowledge base for the design and conduct of the teacher education program.

Student Influence on Programs of Teacher Education

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I stand here this morning to tell you what we can say with certainty from the research that has been conducted on student influence on programs of teacher preparation in physical education. I have conducted an ERIC computerized search of the literature on the topic . . .

Thank you for listening to my research summary! Now, I will move on to the remainder of my talk. Actually, there have been a few studies pertinent to this topic; however, most of them did not involve physical education. Furthermore, most of the related research does not specifically address how students influence curriculum or instructional processes in teacher education. The limited research is, nevertheless, integrated into the ideas that follow.

My focus is on influences in programs and processes of preservice teacher education. The *students* referred to in this paper are undergraduate students majoring in physical education. In the interest of clarity, the term *pupils* is used when referring to students in school programs prior to college.

Several concepts underlie the ideas in this paper. One concept involves three types of student influences: a) explicit influences, b) tacit influences, and c) null influences. Another theme involves the distinction between student interests and student needs as perceived by teacher education decision makers. A cultural perspective is used to integrate the ideas.

Viewing things from the framework of cultural theory does not guarantee a complete picture. Each singular theory of human processes constitutes its own particular form of myopia. A cultural perspective is useful, however, for gaining new understanding and insights into old problems. An easily readable and practical example of this is Sarason's recently revised book on *The Culture of the School and the Problem of Change* (1982). Other books on cultural process and educational anthropology are also quite helpful in stimulating deeper understanding of the meanings of educational processes for students and teachers.

Explicit reliance on a cultural framework is a relatively recent development for me. For many years, I have sought to ground my educational endeavors in the more familiar disciplines of psychology and sociology. I found the literature and constructs of social psychology to be more helpful, since social psychology presents a less fragmented image of humankind than is fostered through or orthodox psychology or sociology.

I have always been interested in philosophy for many reasons, including its often neglected contributions to educational decision making and action. In the past ten years, I have discovered increasing meaning in historical aspects of societies, education, and ideas. I now rely considerably on a cultural perspective, because it reflects the holistic integration and application of philosophy, history, sociology, and psychology. Thus, for several years I have engaged in continuing education in cultural and educational anthropology.

In addition to working from a cultural viewpoint, I operate with a particular definition of learning. It has been popular to define learning as simply a change in behavior. My working definition of learning differs as follows: Learning is a change in perception (broadly conceived) or skill; the resulting change may or may not be reflected in the actions of the learner at a given time, depending upon internal and external influences on the learner. My broad conception of perception encompasses all aspects of cognitive and affective change. My particular orientation may not appeal to you; even so, I believe that the frameworks that I present could be useful to situate yourself, your colleagues, your students, and your program.

My purpose is to share with you a way of thinking about student influence in teacher preparation, rather than to propose particular facts or findings with generalizable validity. The following ideas are based on (a) the limited research available, (b) my experiences as a participant/observer while a faculty member in four different teacher education programs, and (c) an analysis of how culture influences students—some of whom become teacher educators.

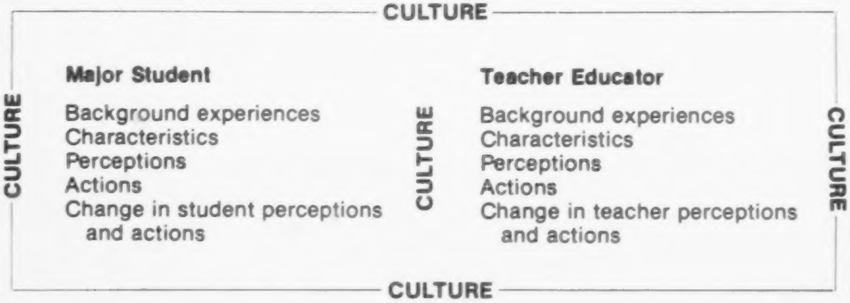
I hope to stimulate reflection and dialogue about influences on teacher preparation, particularly student influences, and to present frameworks on which you may reflect and use to better understand your students, teacher educators, and programs. You can best determine where you, your colleagues, and students fit into the frameworks, if at all. Most elements in the frameworks will be exemplified by some of the diverse students and faculty in each program of teacher education.

In my early work on the assigned topic, I tried to maintain a primary focus on the students as an influence on teacher education. I broadened my outlook, however, since student influence cannot be adequately examined as a unidirectional or non-interactive phenomenon. Student influence is conditional on, and interactive with, other aspects of teacher education. Of particular import, for our purposes here, is the recognition that student influence is mediated by the perceptions of teacher education faculty. Thus, students influence programs through the perception and subsequent action, or inaction, of teacher educators. My analysis highlights the role of teacher educators, as well as undergraduate students, in the actualization of student influence as an outgrowth of cultural influences on both parties.

The resonating influences of students, teacher educators, and culture are represented in the two frameworks that follow. Each framework is both developmental and interactive; however, the first framework emphasizes influences on the development of students and teachers over time. The second framework emphasizes influences on the interaction of students and teachers at any particular time within the teacher education process.

INFLUENCES ON THE DEVELOPMENT OF STUDENTS AND TEACHER EDUCATORS

Let us examine the first framework (see Figure 1). Figure 1 draws our attention to several aspects of students and teachers in teacher preparation programs. All of these elements have occurred, do occur, and will continue to occur within the context of the multilayered cultures in which the actors are immersed. In a chronological sense, teacher educators have been influenced by our past cultural experiences; which helped to shape our current personal characteristics, predispositions, and preferences; which, in turn, affect our perceptions and, ultimately, our actions. Furthermore, the undergraduate major students in our programs have been through a similar cycle of cultural influence through their background experiences, characteristics, perceptions, and actions. Thus, the lived culture of teacher education is rooted in prior cultural experiences. Cultures tend to perpetuate themselves. Yet, education is in the business of change.


CULTURE
Major Student
Background experiences
Characteristics
Perceptions
Actions
Change in student perceptions and actions
Teacher Educator
Background experiences
Characteristics
Perceptions
Actions
Change in teacher perceptions and actions
CULTURE
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CULTURE

Figure 1. A Framework for Thinking About Student Influence on Teacher Preparation.
Elements of this model should be viewed as interactive, reciprocal, and constantly cyclical in relationship, not linear.

Culture is not the sole determinant of a person's characteristics, perceptions, and actions. I believe, however, that culture is important since it influences *how* we perceive as well as *what* we perceive.

A Developmental Emphasis

The background experiences influencing our major students are many and varied; however, most of the students in physical education teacher certification programs share a background in the world of sport. They also have been enculturated as students in physical education; however, many of them did not encounter physical education in elementary schools under the leadership of trained specialists—even fewer were 'participant observers' in an elementary school physical education that represented a genuine alternative to the dominant culture of sport. The culture of sport tends to transmit the more conservative and traditional values and perceptions of the greater American culture. Likewise, physical education, which is generally an emulator of sport, tends to transmit similar values (Earls, in press). It should be no surprise, therefore, that the research on personal traits and teaching practices of physical education majors and professionals reflects similar conservative and traditional values (Sage, 1980). The "athletic syndrome" (Earls, 1979; 1981) and coaching ethos serve a powerful and subtle function in the cultural transmission of particular values, ideas, and activities from the array existing in the American culture. Reference to the athletics syndrome and the coaching ethos is not to provide us with a scapegoat for our difficulties but to identify the sport context as a powerful influence on pupils, students, and teacher educators.

The particular values transmitted to our students in their background experiences in athletics and in sport-oriented physical education tend to influence the development of student characteristics and perceptions. Those particular values include an emphasis on hard work, self denial, discipline, blind loyalty to the group or leader, and achievement orientation as the basis for defining success.

The teacher-coaches encountered by our major students may also have conveyed the cultural contradictions that exist in America (Spindler, 1983). The rhetoric and ideals of valuing individual differences, self development, and individual autonomy are contradicted by the apparent obsession with conformity, discipline, and control that is manifested in school programs of physical education and athletics.

Actions reflecting the coaching ethos are inherently incompatible with ideals of education that are oriented toward the individual learner. Indeed, the traditionally conservative programs and the inherent values transmitted in physical education may account for our exemption from the wrath of right-wing critics of schooling (Earls, 1983, October). Much of physical education is congruent with the ideals of the conservative right-wing ideology.

Female students majoring in physical education may have experienced a somewhat different cultural context. Most of them have come through programs that were primarily sport oriented, although to a lesser extreme of emphasis on competition, achievement, and the Puritan work ethic. Our current female students are, however, probably influenced by a sport and physical education experience that more closely resembles that of the males in recent decades. This apparent shift may have a different influence on teacher preparation programs, and I believe already has in many cases. The changed influence is probably both positive and negative in direction.

Application of The Developmental Framework

Many physical education majors are not accurate in their perception of the abilities, attitudes, and values of the non-athletic pupils in schools. This characteristic would be located in the left column of Figure 1. It is affected by the particular subculture of their background experiences. On the right side of Figure 1 is a space for perception by the teacher educator. It is hoped that teacher educators have more accurate perceptions of non-athletic pupils (including the meanings of physical education to them) than do the major students.

The interrelatedness of several ideas from this paper is illustrated by how my perception of the preceding student characteristic influenced my actions as a teacher educator. Since I perceive sensitivity, awareness, insight, and empathy-competence as a *need* of most undergraduate majors, whether or not it is an *interest*, I have taken the action of creating an assignment for my students to interview people who are "turned off" to physical education. I call these the "malcontent interviews." I began conducting such interviews several years ago as a result of my own interest in what was turning pupils off to physical education. The interviews have been quite revealing and have proved to be one of the most useful assignments for undergraduates. Conducting the interviews and reading classmates' interview reports engages the students in changing their perception through insights into the subculture of a large number of pupils who have merely endured physical education.

The interviews, more than one hundred have now been completed, suggest that we are turning off the natural motivation, interest in learning, and enjoyment of movement in large numbers of school-age pupils. By turning them off, largely through programs and practices acquired through our cultural background, we achieve the reverse of our intended socialization—to socialize them positively into the role of lifetime participant. Many of them are active later *in spite of* physical education. They despise physical education, although not disdaining activity once they find some form that is personally meaningful.

In consideration of the preceding, we might do well to heed the interesting research shared with me by Gary Griffin of the Teacher Education Research and Development Center in Austin, Texas. Several studies have yielded positive effects from enhancing the development of empathy in teachers and in nursing education.

Turning again to student characteristics that may influence the teacher education process, several studies indicate that physical education majors are also characterized by relatively low academic ability. This has many ramifications, not the least of which may be an apparent difficulty in translating theory into practice. Thus, the translation of theory into practice is a task for which teacher educators might play a particularly important role. This depends of course on the teacher educator perceiving "translation" as a problem, and as a serious weakness and need of the students.

The academic ability of physical education majors is not necessarily a limiting factor in their development as teachers. Some of the best teachers may appear to be average or lower on academic criteria. The point here is to examine how the teacher educators' perception of the academic ability of their students functions to influence teacher education programs and processes.

Teachers have to deal with complexity. If we perceive that our majors are generally not capable of dealing with complexity, then we may be influenced toward teaching them simplistic ideas and practices of curriculum and instruction. This may result in teacher education that simply meets students "where they are" (a function of teacher educators' perception) and merely strives to help them to better implement the programs and practices with which they are already familiar (a function of student background experiences in the culture of physical education and sport). More of the same, however, even done somewhat better, may not be sufficient for achieving our goals in physical education for children (Earls, in press).

INTERACTION OF STUDENT AND TEACHER CHANGE ORIENTATIONS

The preceding ideas can be extended with reference to Figure 2, the framework emphasizing interaction of three particular types of orientation to teacher development and change. Orientations of the students and of teacher educators interact to influence the processes and outcomes of teacher preparation. These orientations are more accurately viewed as selected points on a continuum of *continuously* varying dimension, rather than as three discrete types of orientation.

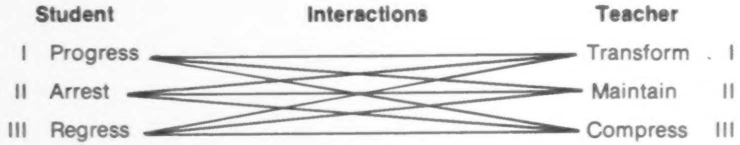


Figure 2. Relations of Teacher And Student Reciprocal influence; Based on Orientation to Change And Development.
The figure emphasizes the orientation of students and teachers toward achieving potential of the students with regard to development as a teacher. Development implies increasing complexity, sophistication, and "response-abilities."

I have used different semantic labels under the student and teacher headings in Figure 2 for each of the three orientations. The middle type of orientation (Type 2) is intended to convey an orientation toward cultural transmission and maintenance of the status quo. The upper type reflects an orientation (Type 1) more toward personal change and cultural transformation, however gradual the process may be. The lower type indicates an orientation toward cultural compression of people and processes to conform to a more limited view, of the role of education for example, than would occur in the "normal" transmission of culture. The lower type is often associated with "going back" to an emphasis on influencing people to acquire considerably limited aspects of the available cultural richness. For a teacher education student, Type 3 might involve a desire to simplify the task of teaching and the curriculum content so that the student is receptive only to the most comfortable and secure teaching behaviors and programmatic ideas. There may be students and faculty of nearly every type in most teacher education programs.

Application of The Interactive Framework

The interactive framework can also be related to the intellectual ability of our majors and its influence on teacher education. As a result of our perceptions of student ability, we may teach the simplistic and the familiar to our students, perhaps ultimately expecting refinement but not transformation to go beyond the familiar. This influence might be represented in Figure 2 by the horizontal line connecting *arrest* and *maintain*, the interactive result of Type 2 orientation in both students and faculty. Such a match of orientations may exemplify much of what occurs in many teacher preparation programs in physical education, and may constitute grounds for substantially more student influence on the teacher education process than is realized by the teacher educators.

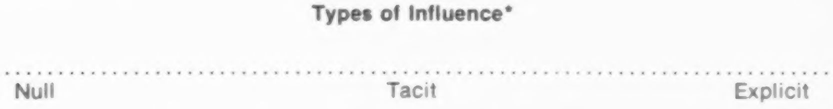
Another, and perhaps familiar, example of the interaction of student and teacher influence is illustrated in Figure 2 by the line connecting the words *arrest* and *transform*. That line may represent the predominant situation in the more idealistic or revisionist teacher education programs. Success *can* be achieved in this circumstance, but it requires time, awareness, and competence of the teacher educator. If, however, a student of Type 3 encounters faculty of Type 1, then there may not be sufficient time in the normal program to achieve reasonable success. (The latter observation, if true, may have important implications for recruiting and selecting students.)

It may be useful at this point to reiterate the role of the idea of refinement of skills and concepts in the various approaches to teacher development. Teacher educators of all three types may attempt to help students to refine their teaching practices and curricula whether the latter are conventional, modified-conventional, or radically different in nature.

TYPES OF INFLUENCE

The nature of influences in teacher education can also be viewed on a continuum with regard to the relative degree of explicitness (see Figure 3).

If the accommodation of student characteristics, perceptions, and actions is fully and consciously stated, in faculty or committee meetings for example, then the influence is explicit. If the influence is unstated, unconscious, or not deliberate, then it is primarily a tacit influence. Null influence refers to influences that the students might or should have but which do not impact the teacher educators or the professional program.



*Note: As was true for teacher and student change orientation in Figure 2, additional types (of student influence in this case) or degrees of the qualities represented on the continuum may be identified.

Figure 3. Continuum of Influences.

It is also useful to note whether teacher educators are responding to the influence created by their *perception* of student interests or to *perceived* student needs. Both student interests and needs are influenced by the cultural background of students. The interests, needs, and perceptions of teacher educators are also grounded in particular cultural experiences—often in the context of athletics. The purposes, content, and processes of teacher education programs are influenced (explicitly, tacitly, or not at all) by the perceived interests and needs of students.

Student interests appear to have a much stronger tacit influence on teacher education than is generally acknowledged. This is particularly true if student interests approximate the interests of teacher educators. When interests are similar, then teacher educators tend to perceive student interests as needs and to justify them with corresponding rhetoric. They reinforce one another and create the influence of a self-fulfilling prophecy.

Another example of student influence can be traced by examining the interactions available in Figure 1. By their actions, students can have a tacit influence on the perceptions of a teacher educator so that the subsequent action of the teacher educator is to modify the task (cf. Tousignant, 1982; Tinning, 1983), modify teacher expectations, or modify tests (Steen, in press). Such task negotiation may be an explicit *or* tacit student influence and the adjustment may be appropriate or not.

Much research is needed on teacher education in physical education. Research on the influence of student subcultures (e.g., Becker et. al., 1961) might lead to new insights. For example, what happens to the subculture (however small) of students of Type 1 (Figure 2) in programs of Types 2 or 3? What is their influence? Are their interests and needs met so that their capacities and orientations are utilized?

SELECTED CULTURAL INFLUENCES

I will shift now to an example of something in which I have gained a different insight as a result of acquiring a cultural anthropological perspective on the influences on the actions of physical education teachers, coaches, major students, and teacher educators. Ritualistic practices are part of the students' background experiences. For whatever reason, these activities and teaching behaviors seem to have a life of their own. They resist change—regardless of evidence contesting the efficacy of such practices.

As an example, for at least ten years, many teacher education programs have taught majors about the detrimental effects, or at least the limited value, of certain exercises frequently used in football practice and in physical education classes. Yet these exercises persist, although apparently to a decreasing degree in physical education classes.

I have informally interviewed several physical education teachers and coaches regarding these contraindicated exercises. The only pervasive reason for continued use of the exercises appears to be the symbolic, ritualistic, and traditional role of the exercises in the long process of initiating young males into the subculture of sport as part of the "rites of passage" into manhood.

Another artifact from the background experiences of students and teacher educators has a pervasive influence on students, teacher education processes, and school programs. Many of us have been enculturated into actions and beliefs consistent with the mythically overstated importance of competition as a way of life. This partially sport-induced phenomenon is an inherently handicapping model when trying to achieve the goals of physical education with pupils other than the motor-elite. (Earls, 1983, April; Solomons, 1980).

Efforts in teacher education to change practices so that all pupils experience substantially more, and more equitable, skill practice are thwarted by our cultural heritage from sport and from physical education as the follower of sport.

CLOSING REMARKS

With regard to Figure 2, it should be acknowledged that we probably have students (and perhaps faculty) approximating each of the three types identified on the continuum of change and development orientations. Recognizing that, we should ask what type of influence our perceptions lead us to foster for each type of student. Do we accommodate the differences and capitalize on their strengths?

On the other hand, we teacher educators should examine our personal background experiences and personal traits to examine the influences that were present and to question whether we are satisfied with our present state of development. Further, are we really aware of how our culture influences our perceptions and treatment of students (Spindler, 1972)? Do we teach and mold our students to be like us—in our image?

What is our "image of man" and our image of the ideal person (Markley and Harman, 1982)? I no longer seek to identify one set of innate characteristics to describe human nature. All things appear to be inherently possible. There is ample evidence. It is up to each of us to choose which aspects of human nature to accentuate and enhance. This is our ethical responsibility to humanity.

If the preceding is reasonably accurate, then it may lead to the identification of one type of relatively null influence that may exist in some of our teacher education programs. Does the full array of "response-abilities" of our students have a strong influence in our programs? Academic ability notwithstanding, many of our students have capacities for excellence in teaching—capacities that could allow them to help more pupils to find personal meaning in physical education, rather than to produce more malcontents. There are many human capacities that we barely tap and may repress by our teacher education processes. The dysfunctional cycle may then be continued in the teaching processes and curricula of our graduates. For an exception, we might turn to the important research on left- and right-brain function and integration to examine human response-abilities and our role in advancing or repressing human progress.

If teacher educators are operating at the "maintenance" level, as indicated in Figure 2, then some of the response-abilities of students may have a tacit or explicit influence. There may be, however, other response-abilities of students that are relatively or completely ignored. In particular, students of Type I may be ready to progress, but have little or no (null) influence on their teacher education program; thus, their needs are not met and their exceptional abilities remain underdeveloped and unrefined.

If, however, teacher educators are functioning to transform—that is, to help students go beyond maintenance and refinement of dominant cultural limitations—then we may begin to make explicit and plan for the development of the remaining response-abilities of our students. We often speak of the need for students to accept responsibility—perhaps we have a responsibility to enhance more fully the response-abilities of our students.

What I am suggesting may be made clear in a generic sense by the following analogy regarding the utilization of an airplane. We could use an airplane in a manner similar to a cart or a wheelbarrow. It could be loaded and pushed or pulled by man or beast. Relegating the airplane to such a passive and dependent role would obviously not be a very good use of an airplane.

We could, however, make better use of the response-abilities of the airplane by filling it with fuel, discovering the key to ignition, and riding in the airplane—at ground level. Thus, it could continue to accomplish what a cart does, but also achieve other aspects of its potential as we use it like a car or truck.

We know, of course, that an airplane is more than simply a cart, wheelbarrow, car, or truck. The airplane can approximate its potential when used to fly—thereby using more of its response-abilities. Indeed, the airplane works more efficiently above ground level. As striking as this metaphor may seem, it imposes unrealistic limitations on humans by analogy to a machine that is dependent on humans.

Elementary school physical education is well situated to develop the response-abilities of children. Teacher preparation can contribute if we do not let student influence drag us down; and, if we do not compress the student major to fit *our* culturally derived sense of limitations.

Many years ago, Goethe said something similar with regard to human treatment, behavior, and perception. It was something like this: If you treat me as I am, then you reinforce my limitations; but, if you treat me as if I am what I can be, then you help me to become what I could be.

Thank you for listening.

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Delusions of "Worth-it-ness": Field Experiences in Elementary Physical Education Teacher Education Programs

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THE BIG QUESTION: WHAT DO FIELD EXPERIENCES REALLY DO TO STUDENTS IN ELEMENTARY PHYSICAL EDUCATION TEACHER TRAINING PROGRAMS?

One of the most commonly held assumptions in physical education teacher education (PETE) programs preparing elementary specialists is that field experiences are naturally beneficial to students. Opportunities to practice pedagogical skills with real clients and teachers in their natural settings are assumed to improve technical skills, knowledge and understanding, professional commitment, and personal dispositions about teaching. Evidence from a variety of research paradigms, however, casts considerable doubt on the proposition that field experiences are inherently good. Indeed, some findings suggest strongly that negative effects on prospective teachers may outweigh the positive gains long supposed to occur when undergraduates actively encounter the workplace settings where one day they will be professionally employed. The purpose of this paper is to examine what research says about the outcomes and meanings of field experiences for prospective teachers, to present evidence documenting both positive and detrimental effects of field experiences, and to propose some general guidelines for thoughtfully improving the effectiveness of field experiences in your own teacher preparation program.

Some Definitions

Within this paper, *field experiences* are guided learning activities for elementary physical education teachers-in-training during which they contact

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Special appreciation is extended to Kim Drake and Mary Hoie who type all my "road map" manuscripts.

children and teachers in their natural settings for the purpose of practicing one or more skills of teaching. It is imperative that students experience real children and teachers in educational environments, that their own learning activities be supervised—sometimes by either university or school personnel, frequently by both—and that their tasks involve doing something related to teaching roles (i.e., that they are given the chance to manipulate some kind of instructional variable) Sieforth and Samuel, 1978). *Early field experiences* are simply those that precede student teaching and which may involve two purposes: to explore teaching as a career option or to practice the necessary teaching skills needed for carrying out that professional role.

While some educational writers very carefully distinguish among the terms *education, training, preparation,* and *schooling,* I choose not to do so in this paper. *Teacher education, teacher training,* and *teacher preparation* are used interchangeably throughout, and should be taken in the broadest sense. Such broad interpretations are valid because field experiences serve the principal functions of familiarization with settings, clients, and models; practice of pedagogical and managerial skills; and discrimination training (getting students to think and consciously decide when to use their technical skills in appropriate situations). Graduates of good elementary PETE programs with good field experiences will have both a broad base of technical teaching skills and the good sense to analyze educational situations, to make fine discriminations about which pedagogical skills to use, and to reflect carefully and considerately upon their choices in order to evaluate teaching effectiveness in terms of pupil learning.

The Urgency of The Question

In the past two years, several educational reform reports have decried the sorry state of public education (Boyer, 1983; Goodlad, 1983; Graham, 1983; National Commission on Excellence in Education, 1983). One fallout effect of these critiques has been that state legislatures are now asking serious questions about teacher training practices. Concerns expressed in the national reform reports coupled with increasing attention to potential teacher shortages in some subjects, have prompted legislators in charge of both policies and purse-strings to take swift, direct actions in the form of new laws about teacher education. For example, a number of states have instituted basic literacy and numeric competency tests for college students wishing to major in education, new teacher certification examinations, and more restrictive specifications about coursework and field experiences in teacher education. Field experience components are one primary target area for legislative action designed to reform teacher education. Ohio recently increased the designated number of hours students must spend in actual schools, while Massachusetts also now specifies precise contact hour requirements as well as the nature and level of field experiences.

Unfortunately, such moves toward external legal mandates for field experiences seem to be hasty and governed more by expediency and short-range financial considerations than by logic, careful study of critical issues and conditions related to sound design of teacher education programs, or rational choice among several equally valid alternatives. State legislatures thus have placed tremendous fiscal and personnel burdens on already underfunded teacher education programs. Average per capita expenditure for teacher education students was $927 contrasted with $2363 for other undergraduates (Peseau and Orr, 1980). No legislator (or teacher educator) has asked such a crucial prior question as, "How do field experiences help prospective teachers acquire their professional skills?"

The presence of field experiences in virtually every teacher preparation program now operating is rooted more in the following two assumptions than in any kind of evidence base built from systematic inquiry (Ishler and Kay, 1981; Puckett, 1982). The first assumption we hold is that field experiences ought to be in teacher training programs because opportunities to practice have always been an integral part of teacher education (Adler, 1984). Medieval monks learned from their peers to write script and illuminate texts in order to pass on accumulated knowledge through the books they laboriously reproduced. In the common schools of colonial America, older students were considered ready to teach after watching their teacher and studying the subjects for several years. Later, teacher institutes and normal schools provided practice teaching of younger students through laboratory schools where teachers-in-training could work with master teachers. Now, in university-based teacher education, public and private schools have replaced the on campus laboratory schools as field experience sites. However, few of those responsible for training teachers at any time in history have asked the questions, "Why do we have field experiences?" or "What do field experiences actually do to prospective teachers?"

The second assumption we frequently make about field experiences is that they are good for students because people learn by doing, and therefore they also learn to teach by teaching. There is high content validity for including field experiences (McIntyre, 1983) simply because logic and common sense tell us so.

In the midst of current political and economic crises creating external pressures on teacher education, it is time for teacher educators to raise questions about what field experiences do to students. Only by posing and then answering hard questions can we maximize positive aspects, minimize negative dimensions, and create the most effective opportunities to practice skills, knowledges, attitudes, and commitments related to good teaching when students engage in work with teachers and children in elementary school physical education.

Some Persistent Myths About Field Experiences

Like Herbert Hoover's campaign slogan, "a chicken in every pot," in teacher education there has been at least one field experience in every program. Associated with field experience are five myths, usually defined as a "set of widely held beliefs that give meaning to events independent of the truth or falsity of the beliefs" (Edelman, 1977). These five myths can be subjected to the litmus test of available research about field experiences to determine their truth.

1) More Is Better. The first myth holds that the more field experiences elementary teacher trainees in physical education have, the more they will learn about teaching and the better teachers they will be upon graduation. Is this true or false? Let's find out what research says.

2) Earlier Is Better. Teacher preparation students who encounter earlier field experiences make firm career choices and commitments sooner and are able to practice teaching skills long before their counterparts in programs where field experiences come later. The truth or falsehood of this second myth can be tested by reference to research.

3) Greater Variety Is Better. Prospective teachers who engage in field experiences at different schools with children of different socioeconomic classes and ethnic or racial backgrounds and with teachers having widely dissimilar approaches to the teaching task somehow gain special benefits that are different from what peers learn who practice teach in single settings with one kind of pupil and a single co-operating teacher. Research can tell us how true or false this notion may be.

4) Progressive And Sequential Is Better. Candidates for teaching careers who move through field experiences which progress sequentially from simple to complex teaching skills, from practicing single skills to orchestrating several at once, and which thereby are thought to gradually increase the novice teachers' decision making capabilities will be different from candidates who don't have such carefully articulated learning experiences. Is research available which tests this myth?

5) Real Teaching Is Best. Undergraduates preparing to teach will learn the most from field settings that are perceived to be most like the schools where they eventually will be employed, and will learn less from field experiences which are less like some representation of the "real world." Truth or falsehood? Only their researcher knows for sure!

A Taxonomy of The Professional Literature

As a background for the following discussion, the author holds the following assumptions about inquiry and teacher education. First, undergraduate teacher preparation is only a small four-year portion of the entire teacher development continuum, which stretches from the 15,000 hours teacher candidates spend as students, through the formal preservice training years, into the first few years of the induction period, and finally throughout the inservice years of a teaching career until retirement. What happens during the undergraduate time period is only a beginning attempt at initiating neophytes into the varied roles of teacher.

The other assumptions are rooted in a view about scientific inquiry, broadly taken here as pursuit of knowledge through answering questions in systematic ways. Systematic inquiry and associated problem solving processes provide one (not the only) important knowledge base for informing the practice of teacher education. Interwoven in balanced proportions with craft wisdom and "connoisseurship" (Eisner, 1977), it is science that produces a reliable, valid data base of information generalizable (explicitly or implicitly) to a wide variety of situations for teacher training practices. Further, many types of inquiry allow us to draw upon complementary perspectives from which to better understand field experiences and to make decisions about how to carry them out in our programs. The most important ways of knowing about field experiences involve directly observing what takes place during these activities. Finally, it is the responsibility of teacher educators (indeed, I regard it as a moral imperative) to "mess about" professionally in the lives of prospective teachers as frequently, as strongly, and as persistently as we can in order to shape their teaching behaviors, commitments, and perspectives about teaching.

RESEARCH ABOUT FIELD EXPERIENCE

The remainder of this paper discusses a sample of research about field experiences in teacher education. Intentionally, it is neither an exhaustive review nor is it confined strictly to field experience research within physical education (because there isn't much). The discussion is intended simply to highlight some of the facts and reasonable suspicions which teacher educators ought to contemplate with great care if they want to provide the best field experiences possible for prospective elementary physical education specialists.

It is often argued that "if we only had more research about" a particular aspect of field experiences, then we would know better how to do them. Research results cannot be translated directly into practice, as was so recently demonstrated in the dismal results of the National Institute of Education's Improving Preservice Teacher Education Project (Lanier, 1984). Of the ten institutions which volunteered to participate in trying to use research to improve their practices or content in teacher education, few were able to make the necessary adjustments in personnel or contextual conditions to allow research information to influence either content or training processes in their programs. If doing more (and better) research is not a *sufficient* condition for improving elementary PETE field experiences, one *necessary* condition is for teacher educators to become familiar with what research says about field experiences. One constructive way for readers to interact with the content of this paper is to imagine what you and your colleagues could do to make use of research information for improving the field experience components in your own program.

General Features of The Literature

This foray into the research literature about field experiences includes (a) a description of some general features of the territory, (b) a methodological taxonomy of kinds of research available, including descriptive-analytic, psychometric, qualitative, and socialization theory-based, (c) two exemplar studies described and analyzed in some detail, and (d) a caveat about three potential pitfalls common to field experiences of which all teacher educators ought to be aware.

What we know about field experiences comes from both research and nonresearch literature. Research offers one perspective based on the formal processes of specifying a precise empirical question, choosing appropriate techniques for gathering information to answer that question, organizing and analyzing that information, and then offering to interested audiences careful discussion of the meanings which emerge from the study. Nonresearch literature may provide a variety of less formal approaches to the same topic: description of current practice, logical analysis of practice, guidelines for improved practice, or presentation of idealized models for practice. Both perspectives are valuable for teacher educators who must rely on individual mixtures of norms from craft wisdom, moral values, personal aesthetic tastes, and practical constraints (Locke, 1984b) as well as those norms based on scientific evidence to provide guidance for the ways they carry out their programs.

Field experience literature can be found in both the generic research on teacher education (RTE) and specific research on teacher education in physical education (RTE-PE), though there is far more of the first than of the second. Research studies in physical education (RTE-PE) draw upon the same framing questions, methods of inquiry, and explanatory concepts as does the research on field experiences found in the generic literature. While caution is always wise when transferring findings from RTE to RTE-PE, as well as from research to applications in practice, there is no reason to believe that field experiences, teacher educators, or prospective teachers in physical education are so different from those in other subjects as to preclude entirely the credibility of field experience studies conducted outside physical education.

The most popular topic in the research about field experiences is student teaching (Locke, 1984a). Approximately one of every three or four studies can be classified into this category, perhaps because student teaching is the most intense, the most complex, the most important, the last, or, in many programs, sinply because it is the only field experience encountered.

Descriptive Research

Whether research or nonresearch, descriptions of field experiences answer the question, "What's actually going on out there?" Surveys tell us that practically every teacher training program in the country now has field experiences preceding student teaching and that the trend is toward more rather than fewer (Ishler and Kay, 1981; Puckett, 1982). In physical education, early field experiences are present but very little of that time is actually spent in teaching per se, contrary to what many of us might think (Placek and Silverman, 1983).

While surveys provide a broad, cross-sectional view of the state of field experiences in professional training programs, "case study" accounts of life in particular programs give us the "up close and personal" view (Zeichner and Teitelbaum, 1982; Sikula, 1978; Page, 1983). Model programs, current practices, and even a few theory-based programs are described (Elliott, 1978; Lanese and Fitch, 1983; Sieforth and Samuel, 1978; Souers, 1981). Some writers discuss various innovative arrangements for implementing field experiences (e.g., as parts of university courses, in school-based programs, or at teaching centers) (Bossing, 1981; Frey and Murphy, 1982; Ross, Raines, Cervetti, and Dellow, 1980), and others carefully communicate about how field experiences articulate with other parts of the program, that is, when they occur in relation to coursework or how many credit hours they are worth (McNaughton, Johns, and Rogers, 1982; Nicklos et al., 1982). Considerable attention has been given to explaining the wide range of tasks students are required to do in field settings, such as observing, tutoring, small group work, or whole class teaching (Friedman, Brinlee, and Hayes, 1980; Nolan, 1982; Woolever, 1983).

In short, there is a substantial amount of information available about what's going on in field experience components of teacher training programs. It is less encouraging to note, however, that important evaluative questions about how well these activities work to help students make career decisions or learn teaching skills are not commonly addressed in descriptive literature.

Psychometric Research

The long and venerable psychometric tradition in educational research involves the use of paper-pencil inventories designed to capture participants' feelings, beliefs, attitudes, perceptions, values, dispositions, and even personality traits. Psychometric instruments have been applied in the context of field experiences, usually asking participants about their involvements with pupils, cooperating teacher, university supervisor, the tasks they are requested to perform, or the roles they play in the field setting. Psychometric tools help us answer questions like, "What can we learn about field experiences' effects on participants by soliciting their viewpoints or perceptions?"

In general, some variation of the pre-test/post-test model is used to collect data, under the presumption that any changes from the "before" to the "after" measurement are attributable to the operation of the field experience. Typical examples of psychometric instruments used to learn about field experiences include the Minnesota Teacher Attitude Inventory, the Pupil Control Ideology form, and the Tennessee Self-Concept Scale.

Psychometric research has been used to discover how accurately measures such as grade point average (Bittner, 1977), aptitudes (Hill, 1981), a person's own psychomotor skills (Miele, 1979), or personal characteristics (Brownlow, 1980) can predict success in student teaching. Another use of psychometric instruments is to elicit the perceptions of triad members (i.e., student teacher or field experience student, cooperating teacher, and university supervisor) about aspects of training students in field settings. Ratings of field experience goals, expectations about the functions of each triad member, self reports about the roles played by each, the performance of the prospective teacher, and participant satisfaction with field experiences are all represented by their own small clusters of research studies based on psychometric techniques. We now know that the following seem to have been demonstrated repeatedly across a variety of field experiences:

1. Early field experience students and student teachers often become more generally negative, more conservative, more authoritarian and more custodial; and their self concepts seem to deteriorate (Adkins, 1980; Benjamin, 1977; Crocker, 1980; Dzikielewski, 1975; Hoy and Rees, 1977; Levine, 1980; McArthur, 1978; McCullough, 1980; Rodenberg, 1980; Templin, 1979; Trimble, 1974).
2. Participants, particularly triad members, more often disagree than agree about nearly everything that happens during field experiences (Barnes and Defino, 1983; Barnes and Edwards, 1984; Griffin, 1983; Martin and Wood, 1984), with the exception that
3. there is almost universal agreement that the cooperating teacher has the greatest influence on field experience students (Denscombe, 1982; Edwards, 1982).
4. No psychometric measure does very well at predicting how well students will actually teach, although prediction studies (some with absolutely "wild"

variables) have enjoyed some popularity (Bittner, 1977; Hill, 1981; Miele, 1979).

5. Graduates of programs were generally quite well satisfied with field experiences—in fact most graduates call for more time in schools (Adkins, 1980; Gatchell, 1978; Logsdon, personal communication, 1984; McDonald, 1979; Nealy, 1981).

Qualitative Research

One newly emerging category in the taxonomy of field experience literature is qualitative research. Broadly, the questions asked are similar to those for descriptive research, that is, "What's going on in this field experience?". The major differences, however, reside in the researchers' frame of reference. In descriptive studies, researchers use a preconceived framework into which all data will be fitted, whether the source is systematic observation or psychometric instrument. Qualitative researchers, in contrast, use a variety of techniques designed to capture the meanings participants give to their own encounters with field experiences. Data collection is frequently triangulated from some combination of field notes, participant observation, interviews, document analysis, and other techniques of microethnography. Such methods in inquiry allow the participants' perspectives to emerge, rather than researchers' predispositions to be confirmed. Qualitative research thus enriches our knowledge base by helping to make sense of vitally important contextual factors to which we otherwise seldom attend when we try to understand what happens to students during field experiences.

Qualitative investigations from generic RTE have explored students' perceptions of the purposes and meanings of early field experiences (Erdman, 1983; 1984); self-perceptions of university personnel supervising field experiences about the roles they play (Koehler, 1984); what expectations are held for the performance of student teachers, cooperating teachers, and university supervisors (Griffin, 1983); and contexts of student teaching in universities and schools (Barnes and Defino, 1983).

Iannaccone's (1973) classic qualitative study of student teaching treated this final field experience as a transition period from undergraduate education into inservice teaching. The most important things student teachers learned were to keep their pupils quickly moving through the lessons as cohort groups (regardless of what individuals might be learning), to manage efficiently to be at the "right place" in prescribed curricula during the school year, and most of all, to use "whatever works best in this situation" as the ultimate criterion for deciding which teaching techniques to adopt.

If these are not the behaviors teacher educators want their students to acquire, than Iannaccone's study must be taken as one early indication that the effects of teacher preparation can be effectively and almost instantly countermanded by experiences in schools. This early qualitative study forces us to consider questions about whether field experiences exert a sort of "opposition effect" that counteracts attitudes, dispositions, skills, and knowledges about teaching which campus-based parts of the program espouse.

Socialization Research. In their attempts to make sense of the patterns and themes that emerge when field experiences are studied from qualitative perspectives, many researchers have adopted socialization theories as an explanatory mechanism. Professional (or occupational) socialization is quite useful in understanding what happens to teacher trainees when they spend time in schools with children and teachers. In terms of teaching, professional socialization is the process of acquiring the technical skills of teaching, a professional orientation that informs one's behaviors in teaching roles, and the identities and commitments which motivate one to teach. The combination of socialization theories and qualitative perspectives on research offers some of the most compelling and persuasive evidence we have about the powerful effects of field experiences on teacher trainees.

Certainly teacher socialization is a complex process, including such influential factors as an individual's biography (Lortie, 1975) and various anticipatory socialization phenomena (Lawson, 1983a; 1983b; Pooley, 1972). Even so, field experiences still account for much of what trainees *really* learn (and later use) from teacher education programs. Field experiences affect students profoundly, shaping their views toward schools, teachers, pupils, teaching, and learning. Only the first year of actual employment, the induction year, has so much potential for shaping teachers, and even the events of induction may be partially predisposed by what has gone before in preservice field experiences.

We know that students progress through several socialization stages during field experiences (Lacey, 1977), beginning with the "honeymoon period", a time when their overall reaction can be summarized by the question, "Isn't teaching just great?" As they gradually realize that teaching is instead quite problematic, they begin a second phase of searching for materials to occupy their pupils with intriguing learning activities as a way to decrease their own problems. Next comes the crisis stage, which may be either fleeting and momentary or long-term and overwhelming. Students become aware of how much they have yet to learn about teaching and begin to share both their problems and potential solutions with peers during seminars. This allows for testing out their perceptions about teaching with others who also are being socialized in field settings. The fourth stage involves students learning the best ways to "get by" in student teaching (i.e., making it through with the least damage to their developing self-image as teachers and with the approval of the experienced teachers with whom they share their daily life in schools).

Social strategies (Lacey, 1977) such as strategic compliance (going along with your cooperating teacher, even though you hold secret reservations about what's being done and fully intend to do something else when you get your own classes), internalized adjustment (going along with the cooperating teacher because you really believe in those actions yourself), or strategic redefinition (adjusting your actions so they are somewhat different from those of the cooperating teacher but not so different that she or he cannot accept what you do) are ways for field experience students to "push back" against the system which so overwhelmingly shapes their behaviors (Marrs and Templin, 1983; Zeichner, 1979).

In physical education, too, some qualitative research evidence confirms field experiences as a strong socializing influence on prospective teachers. Both the quantitative Pupil Control Ideology scale and qualitative interviewing techniques corroborated that student teachers adopted their cooperating teachers' outlooks toward pupils (Templin, 1979). From a different direction, student teachers' critical incident reports (Schempp, 1983) described the same key features of teacher role satisfaction and role competence that experienced teachers mentioned in another study (Placek, 1983): the importance of keeping pupils busy, happy, and good was apparently conveyed to Schempp's sample of student teachers by the experienced teachers with whom they worked in field settings.

Qualitative research, then, informs teacher educators about field experiences by spotlighting the social/environmental context of schools as a teachers' workplace as well as a place for pupils to learn. Though a relatively recent addition to scientific inquiry in both RTE and RTE-PE, it can be stated with some confidence that qualitative research already has contributed the following six important new insights about what field experiences do to undergraduate teacher preparation students:

1. Socialization is a long-term, complicated process that begins long before students enter teacher training programs but field experiences are responsible for a significant amount of the professional socialization which occurs during teacher preparation.

2. Neither the field experience component nor other portions of the professional program are successful in liberalizing the outlook of most students toward anything that happens in schools. On the contrary, students frequently are coerced into the prevailing traditional, conservative ethos of the school systems where they spend field experience time (Zeichner and Tabachnick, 1981).

3. It's probable that field experiences "wash out" at least some effects of other elements of teacher education (Zeichner and Tabachnick, 1981) by directly contradicting the values, attitudes, knowledges, or overt behaviors taught through explicit or tacit messages.

4. As was true of results from quantitative studies, the cooperating teacher has been repeatedly confirmed as the single most important influence on prospective teachers when they are in the field (Lacey, 1977; Templin, 1979).

5. Field experiences have the greatest impact on students when the settings mirror most directly and accurately the occupational world perceived by teacher trainees.

6. Finally, the perspectives of qualitative research force teacher educators to confront the fact that school and classroom contexts have tremendous impact on prospective teachers. Because the construct of teaching context is addressed only peripherally by other forms of research, it has been overlooked by scholars and teacher educators. By attending to the context field experiences offer, qualitative research may provide singularly effective cues for improving context and processes in that program component.

Exemplary Studies: A Potpourri

Like photographers who exchange wide-angle lenses for telephotos when they want to view an object in more detail, we will now look more closely at some research with persuasive messages about field experiences. The following discusses studies that bring into focus some of the critical questions we ought to ask about how field experiences in PETE programs affect prospective elementary physical educators. The importance of asking and answering those questions is underscored by evidence that field experiences are not as universally beneficent as we once presumed.

No single study can offer irrefutable proof of any phenomenon in education but the cumulative effects of those cited appear as a pattern—dim, but ominous in its implications for the conduct of teacher trainees' learning experiences in school settings. Quite simply, no overwhelming trends exist that tell us field experiences help students learn teaching skills more quickly, more efficiently, or to greater levels of competence. Here's what field experiences really do (or don't do) to our students:

1. Early field experiences don't alter preservice teachers' concerns about teaching (Tanner, 1982).
2. Students with fewer field experiences reported the same problems, perceived their professional preparation in the same way, and were rated just as highly by cooperating teachers as students with more field experiences (Henry, 1983).
3. Pre-student teaching field experiences were not a significant factor influencing career choice into teaching (Willems, et al. 1982).
4. Despite a lot of day to day, class to class shifting around in what you might observe concerning teaching methods and style, overall student teachers ended up doing about the same things at the end of the semester that they did on the first day (Marble, 1984).
5. Little relationship was found between number of hours spent in early field experiences and performance in student teaching (Calfee, 1983).
6. Neither early field experience students nor student teachers showed any changes in their concerns about teaching (Silvernail and Costello, 1983) but student teachers showed decreased anxiety levels.
7. Students with more field experiences were not any better on their teaching performance than were those with fewer experiences in schools (Kelly, 1970).
8. Varied field experiences (urban and suburban school sites, age levels) did not make any difference in authoritarianism, or in preferences for using educational objectives or for particular teaching styles among students (Melograno, 1976).

On the bright side, however, the following are some positive signs that do exist that field experiences are not universally bad:

1. Some students with early field experiences did better in both concurrent and later coursework than students without such background (Denton, 1982; 1983).
2. Student teachers with longer terms did better on teaching performance assessment than did student teachers with shorter terms (Freeze, et al. 1984).
3. In physical education, student teachers who had early field experiences provided higher student activity time and ALT than student teachers who had no early field experiences (Paese, 1984).

Social Controls on Field Experience Students. Goodman (1983a; 1983b; 1984) asked the question, "What are the relationships among teacher preparation program rhetoric, oncampus course activities, and field experiences?" and used qualitative methods to find out the answers. He sat in college classes, student teaching seminars, and in the classrooms where elementary education majors were placed, using field notes from classes and field experiences, document analysis of course syllabi, and interviews with students, university professors, and cooperating teachers.

Program rhetoric (what the college professors told students about teaching) encouraged students to experiment creatively with pedagogical strategies in their field placements. In contrast, the reality of their school experiences was highly structured, mechanistic, and predetermined.

The field setting exerted three forms of social control upon students. First, the students taught mostly reading from a drill and basal text approach. The elementary reading curriculum was preplanned by experts (a canned curriculum) to be so structured that these student teachers could not be creative in their lessons. Only three out of 37 were able to plan their "own" units—the rest turned in "original" unit plans, but they were indistinguishable from those of cooperating teachers or the preplanned curriculum.

Second, the notions of accountability and testing of pupils were such a strong social control that the student teachers felt compelled always to have children ready for testing and did little else that deviated from that purpose. Pressure to have the class at particular points in their work on a regular school year timetable was a definite determinant of how students planned learning and drill activities for the children.

Having children test-ready naturally led into the third social control: how students viewed the function of instruction. Managerial efficiency was synonymous with good instruction. Pupils had to be busy and good or the students believed they had failed as teachers. Good management techniques made more time for drills and practice, which in turn meant children were ready for the unit tests right on schedule.

While students were already caught in the disjunction between program rhetoric telling them to be creative teachers and the reality of field settings where creative teaching was a virtual impossibility, there was a further source of discomfort: their methods courses supported what was happening to them in the field. Instead of being taught how to be creative in planning and carrying out lessons, students were given instruction in teaching with basal reading texts, thus emphasizing the same things they faced out in the field. Professors required very little reflection on teaching (but *told* students to reflect!), and students gradually adopted unquestioning approaches to teaching. Further, the professors stressed managerial efficiency, so students "could teach the kids the most possible within the given timeframe."

Two sorts of discontinuity are immediately apparent: the mismatch between the rhetoric and daily realities of coursework within the program itself and the mismatch between the program rhetoric and the field experiences. What had begun as an innovative teacher education program grounded in questioning and serious reflection about alternatives in teaching was engulfed in the social realities of conservatism and traditionalism not only in the schools but in the university as well. Small wonder that interviews with these students found a prevailing sense of cynicism and even bitterness about the mixed messages they were receiving from their teaching training.

If this example teaches us nothing else, it can sensitize us to monitoring how well what we *say* we do in preparing elementary physical education specialists and what we *actually* do in our professional development programs matches, in both coursework and field experiences.

Teaching Behavior Changes in Planned Field Experiences. Of particular interest to physical education teacher educators is a study by Gusthart and Rink (1983), not only because it is our subject area, but because it ably illustrates the kind of intensity needed by researchers who investigate field experiences' effects on students. This study is set in a program context which was systematically designed to emphasize field experiences as a learning vehicle in which teacher trainees could have ample opportunities to practice the particular instructional content-process skills upon which this program is founded. The faculty designed an elaborate sequence of field experience components demanding increasing levels of complexity and difficulty in teaching skills.

The researchers, in turn, paid careful attention to the kinds of questions they raised about the effect of those field experiences on students and to the detailed kinds of evaluation data sought. The quantitative results are drawn directly from what actually happened to the teacher trainees' teaching behaviors, and data were collected by direct observations while the students taught in their field settings. The complexity of the teaching behavior categories recorded led to a rich data base which makes it almost inevitable that different interpretations of results can be made. Readers primarily interested in a good model for using direct observational methods to evaluate how field experiences affect trainees' teaching behaviors repertoires should read the original report.

Safe generalizations drawn from this study to help teacher educators think more clearly about maximizing positive effects of field experiences for their own students do not necessarily depend on either the direction or magnitude of any single teacher behavior change reported. At least it is fair to say that:

1. Students entered this complex series of field experiences with unusually high levels of performance on the teaching behavior indicators measured in this study.
2. Students did not change significantly the levels of teaching behaviors demonstrated as they progressed through the sequential field experiences (i.e., there was no explicit pattern of continued improvement in the whole constellation of teaching behaviors throughout the time period covered).
3. As students confronted more demanding tasks in the increasingly difficult field experiences, their performance on some of the critical teacher behavior variables deteriorated from initial levels.

The powerful message here is that this PETE faculty now has the quantitative data in hand that provide a clear, explicit picture of teaching behavior profiles of students who have participated in a well-defined, sequential, progressive, and clearly articulated series of field experiences. Combined with other sources of data (e.g., qualitative), the faculty now is armed with the knowledge that will make it possible for them intelligently and deliberately to alter those field experiences. Such planned change strategies can increase the probability that future students will be able to improve significantly their teaching performance by participating in those field experiences.

Pitfalls of Field Experiences. If the foregoing examples of research have created some uncertainties, raised a question or two, or at least made you vaguely uneasy about *your* program's field experiences, Feiman-Nemser's and Buchmann's (1983) account of three pitfalls in the practicum is sure to sound uncomfortably familiar. Based on qualitative study of classroom settings, these three characterizations of what happens when university students enter schools to practice teach should hold perfectly true for physical education.

Familiarity is the first pitfall which accounts for students' not learning from field experiences what teacher educators would like to anticipate. Students think they know about teaching and learning and schools simply because they have spent 13 years there as pupils. Even though that perspective is much different from being there as teacher, students frequently tune out or turn off any reflective thinking about what goes on in classrooms they visit because they think they already know what happens. For teacher educators (and cooperating teachers), this becomes the problem of having to help students set aside their personal experiences long enough to consider and add other dimensions and perspectives about what current teaching practices *are* and how those relate to what *could* or *should* be done in teaching.

Two worlds, the second pitfall, draws our attention to the fact that students are novices who cannot automatically transfer what they learn about teaching in college classes to the field settings where they encounter pedagogy in a different context. This results sometimes because university and field settings may convey opposite messages, but more often because students need assistance in making sense out of the relationship between what they learn in the abstractions of a college class and the real events of teaching in the school context. To illustrate, it doesn't make sense to send students out to observe without being explicit about what and how to observe, and without help in understanding how theory helps to illuminate practice. Further, even the activities of the practicum must serve to relate rather than disassociate program and field perspectives. If teachers are not seen to use formal observation skills, why would students find such assignments credible as professional preparation?

The last pitfall relates to the *cross purposes* phenomenon. The purpose of schools and teachers is to educate children, not to teach prospective teachers how to teach—or to help them make wise vocational choices. Accordingly, many novices will not be allowed to engage in activities that might be ideal for their personal development. A school is not an extension of a teacher training program. It follows that the reality of schools for teacher trainees is farther from the reality for experienced teachers than commonly has been admitted.

Recommendations

It is perhaps possible to argue that the field experiences we design for training elementary physical education specialists are not susceptible to these pitfalls, or that our students have powers of resistance against the forces pushing them to conform to the social contexts of schools, or that we as teacher developers are so smart that we can avoid most of the problems of implementing field experiences to which previous sections of this paper have referred. I would not argue that way, nor would I interpret the possibility of doing good field experiences as so dismal that we ought not to bother.

Instead, I urge readers to take this position: the more we know about doing field experiences, whether the knowledge is about successes or problems, the better prepared we are to think about the right issues, to ask the right questions, and ultimately the better chance we have to do the right things. Designing field experiences which function in positive ways is a tougher task than most of us knew. It requires different kinds of thinking and different actions, some of which are proposed below. The best advice remains: think small, find company, and ask questions (Locke and Dodds, 1984). My advice is:

1. *Don't* rush out to add any more field experiences to your program. Take a hard look at what you have now and see if some intelligent tinkering can make it better. Total redesign is unreasonable, probably impossible, and feels too overwhelming even to make a beginning.

2. *Do* make effort to dialogue extensively (not monologue!) with cooperating teachers. Make this a long-term effort, not a one-shot meeting. Talking together clarifies positions, helps find common ground to start with, and can even lead to developing commonly held assumptions about training teachers from initially diverse viewpoints—the key is continuous and open dialogue.
3. *Do* be clear with students (and university faculty and cooperating teachers) about exactly what they are to be doing, what they should be learning from their presence in the field, and how it relates to good teaching. Hold them (and ourselves) accountable for demonstrating a core of specific behaviors appropriate to status as a beginning teacher.
4. *Do* be sure students get lots of chances to sit down to talk with somebody about their field experiences—every time they set foot in a school. University personnel and cooperating teachers, together, or peer support groups are all useful listeners and reactors. Reflective discussions of experiences are as worthwhile as having the experience in the first place.
5. *Do* help students reflect upon and think about *everything* that happens to them in schools—cognitive, affective, and social aspects as well as doing the technical skills of teaching. *Do* help students make connections (recognize congruence and dissonance) between what they learn at the university and what they learn in a field experience. *Don't* be afraid to explore the implications of different messages students receive from both sources.
6. *Do* monitor very closely what goes on when your students are "out there." Faculty supervision is the most cost-ineffective operation in teacher education, but we must know and understand what happens to students in schools in order to make sure that effective things happen as often as possible.
7. Finally, evaluate how well your teacher education program carries out its field experiences. Use all the sources of information you have (faculty; cooperating teachers, administrators, and pupils in schools; your students; external observers; and your own perceptions) to get the clearest picture you can of what's happening. Only then can you make informed decisions about whether to change and what those changes ought to be.

Field experiences are likely to remain a significant part of most PETE programs preparing elementary specialists. How worthwhile those experiences will be depends on several things: (a) how well teacher educators can separate the myths about field experiences from solid evidence grounded in reality, (b) how well they can draw upon the knowledge base of research, and (c) how well they can blend such information gained from systematic inquiry with other sources of wisdom to make practical decisions about how to run their programs. If we want children to have the best possible physical education teachers, we have some changes to make in the field experience components of our teacher preparation programs. The effort *is* worth it, but as John Denver ends one of his recent songs, "It's about time, and it's about changes, and it's about time!"

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The Process of Personal Professional Integration

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Many approaches have been used to design quality teacher education preservice programs. Our personal involvement in the professional preparation of physical education teachers suggests that we need to review the framework for conceptualizing teacher education curricula about every five years. Twenty years ago we were enthusiastic about systems analysis. We were drawing diagrams with blocks and arrows and identifying inputs and outputs. From there it was a logical move to the certification of competencies. Developing a Competency Based Teacher Education (CBTE) program was a relatively straightforward challenge requiring the listing of all essential and desired competencies, describing criteria and standards by which the achievement of these competencies would be demonstrated, and planning courses and testing programs that would ensure mastery of these competencies.

It is not surprising that the CBTE approach led to unmanageable content for university curriculum committees to review and approve. The resistance of college faculties to the increasing prescription of curricular trivia might have been predicted. Furthermore, there was a noticeable groundswell of dissatisfaction from the clients who began to suggest that they were not sure, if all of these specifics were required, that teaching was really what they had in mind as a professional career.

As a result, professional preparation programs designed for alternative careers became fashionable. Young people who enjoyed participation in sports and fitness activities were enthusiastic about alternative careers preparing them for atheltic training, sports management, fitness leadership, sports journalism, and many other careers oriented toward making activity participation more accessible to others. To be sure, colleges and universities in the business of preparing physical educators continued to offer teacher certification programs and, specifically, programs to certify elementary school physical education specialists. Still, these programs were certain to feel the impact of the growing enthusiasm for alternative careers in sports and fitness enterprises. Professional preparation curricula were designed with alternative tracks having a common core and alternative professional specializations, one of which continued to be secondary school teaching and coaching and, in some instances, a second alternative which was viewed as preparation for teaching young children movement.

It is clearly time for a reconceptualization of professional preparation of elementary school physical education specialists. A conscious paradigm shift necessarily requires examining the value orientation that will determine key curriculum decisions. We are ready to discard both disciplinary mastery and social reconstruction as appropriate curriculum development approaches. Even learning process and self-actualization are limited approaches. The professional preparation model which seems to better meet today's needs is based on a value perspective which might be designated as ecological validity.

It is not appropriate today to discuss this preferred value orientation in detail. However, since the plan for integrating and sequencing the professional program elements described in this paper is based on a value orientation of ecological validity, it seems necessary to at least identify the key characteristics. Figure 1 provides a graphic representation of the relative emphasis placed on the three curriculum elements from each of five value orientations. The overall curriculum perspective of ecological validity places the three fundamental elements of individual, society, and subject matter in balance. Individuals achieve personal validity only as they are able to function effectively within the society. The society is healthy only to the extent it supports the growth and development and well-being of individual members. Subject matter is valuable when it contributes to realizing both individual and societal goals. The overall perspective of a curriculum using an ecological validity orientation keeps the individual and society in balance. The learner perspective focuses on personal meaning. The social perspective emphasizes ecology, futures, and global concerns.

Our proposed model for the professional preparation of elementary school physical education specialists reflects a value orientation of ecological validity. It incorporates five dimensions for integration and for sequencing program elements. Two dimensions provide vertical sequencing: (1) three overlapping components in a four-year preparation program and (2) three content areas which are developed sequentially through all three of the major components. The other three dimensions support integration horizontally throughout all stages of curriculum development. They provide for: (3) concurrent development of essential knowledge and understanding and of performance and application skills and abilities; (4) personal integration through a continuous cycle of assessment, goal setting, and evaluation; (5) social integration through a combination of advising individual students and organizing students into learning/group development teams.

The overall curriculum plan has three major components: (1) entry, or foundations, (2) individually scheduled coursework and laboratory experience modules, and (3) synthesis. The foundations component consists of a one-year sequential block program including common core experiences as well as individual assessment and appropriate experiences based on individual profiles. The middle component permits students to individually program traditional coursework in both activity and classroom lecture/laboratory instruction. Coursework is accompanied by individualized professional laboratory or field experiences that provide for application of key course concepts. Preferably, these individually programmed courses and complementary experiences could be spread over one or two years between enrollment in components one and three. The synthesis component is viewed as a senior level program, either a one semester block program scheduled as a

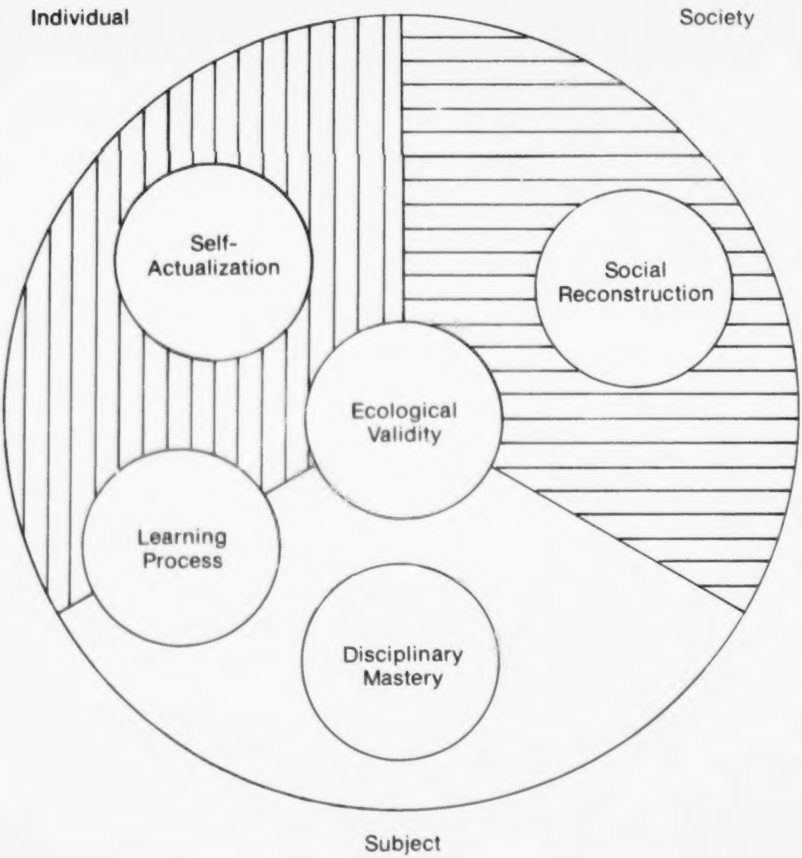

Individual
Society
Self-Actualization
Social Reconstruction
Ecological Validity
Learning Process
Disciplinary Mastery
Subject

Figure 1. Overall Value Perspective. (Adapted from a graphic created by Colin Higgs, University of Oregon.)

full-time load or a half-time block program for an entire year. It focuses on preparing for a full-time professional laboratory experience, student teaching, evaluating the teaching experience, and planning for the transition to continuing education as an inservice activity.

To facilitate transfer from other programs or late entry, the middle component can be scheduled so that it overlaps with the foundations component or the synthesis component, or both. A student entering the program with junior standing will be able to complete the program in two years only if he or she has completed courses which meet your university's general education requirements and if courses already completed can be credited toward 20 to 25 semester hours of work required in your major curriculum.

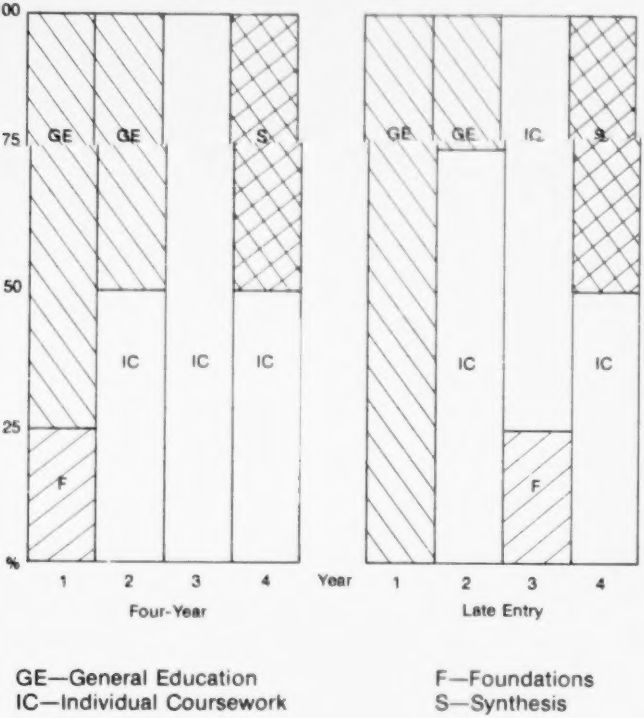


Figure 2. Student Program Allocations

Figure 2 illustrates approximate percentages of curriculum credit hours designed for each component. These patterns allocate five percent of the curriculum for the entry component, 50 percent for individually scheduled coursework, and 15 percent for the synthesis component, leaving 30 percent for general education requirements. These figures differ from usual guidelines because the individually scheduled coursework includes not only the essential physical education major courses, but also required general education courses which are prerequisite to certain major courses and state teacher certification requirements. In planning sequences, these courses must be individually scheduled because many of them require prerequisites or upper division standing.

Within this general pattern, integration is fostered by developing sequential experiences within three major content areas: (1) fitness, (2) movement, and (3) profession. In all three content areas, the student will be seeking to gain knowledges and understandings and to develop performance abilities and application skills.

The fitness experiences are directed toward fitness knowledges and understandings and the actual development and maintenance of personal health-related fitness. Physical educators will develop progressively more sophisticated fitness understandings and practical abilities throughout the entry component, their individualized coursework, and the synthesis component. The movement experiences focus on movement analysis and understanding and on the development of movement performance skills. Students will learn to perform fundamental locomotor, manipulative, and rhythmic skills; develop more advanced movement understandings and abilities through planned progressions of games, gymnastics, and dance activities; and participate in sequences of activities directed toward the analysis of human movement from a variety of perspectives. The professional experiences are directed toward clarifying philosophy, knowledge about curriculum development, planning instruction, analyzing teacher behavior, and evaluating curriculum and instruction. Professional experiences also include practice activities that provide for developing professional performance skills and applying the skills to teaching elementary school physical education. Throughout the years of professional preparation, a prospective teacher will achieve professional competence through sequential experiences in teaching and curriculum development culminating in a full-time student teaching experience.

Keeping in mind that the content of fitness, movement, and profession will be studied throughout all three major components or curricular levels, and that performance and application skills will be combined with developing knowledge and understanding in studying all fitness, movement, and professional topics, we will attempt to detail somewhat further how program elements will be integrated and sequenced. The entry level component (see Figure 3) might be planned as two courses, one providing an introduction to the profession and the other an introduction to movement and fitness. The professional orientation class would be a classroom lecture-laboratory course with a primary goal of providing experiences to help students develop and clarify a personal philosophy of physical education. Learning activities should include field experiences in local schools and emphasize group interaction with

Fitness	Movement	Profession
Components of Fitness Health-related fitness appraisal Personal prescription and development Nutrition and weight control Smoking and substance abuse Relaxation Exercises for strength and flexilibity Aerobic activities and games	Fundamental locomotor and manipulative skills Stability and balance Rhythm Movement qualities Personal appraisal Personal prescription and development Games to facilitate acquisition of specific movement skills	Introduction to education History of physical education Philosophy of physical education

Figure 3. Topic Outline I: Foundations Component

peers and with representative faculty members. Value clarification activities might include ranking physical education priorities, observing individual students in physical education classes, discussing critical incidents, describing the ideal physical education class, and writing curriculum metaphors. The course content should also include an introduction to concepts of play, an introduction to the history of physical education, and foundations of American education. The course should also be designed to meet the state certification requirement in educational foundations.

A foundations of movement and fitness course should include substantial activity content and key concepts of both fitness and movement. Possible fitness content might include components of fitness, health related fitness appraisal, personal prescription and development, nutrition and weight control, smoking and substance abuse, relaxation, exercises for strength and flexibility, and aerobic activities and games. Movement content might include fundamental locomotor and manipulative skills, stability and balance, rhythm, movement qualities, personal appraisal, personal prescription and development, and games to facilitate acquiring specific movement skills. We have initiated such a course at the University of Georgia. It is a daily course which heavily emphasizes activity participation, and is supplemented by mini lectures and emphasis on integration through application of specific knowledges and skills in game settings, outside assignments requiring application of class learnings, and development and initiation of a personal fitness program.

The foundations component could be completed within one term or carried through the initial year in an undergraduate professional program. Coursework would be identified by the local faculty curriculum committee (see Figure 4). Such courses would be scheduled in an individual student's program over a two- to three-year period; the course organization would be similar to that currently used in the better undergraduate programs. Required courses emphasizing fitness content would include fitness activities courses, personal health, first aid and CPR, physiology and exercise physiology.

Fitness	Movement	Profession
Fitness activities	Courses to develop selected motor performance skills (gymnastics, aquatics, games and sports)	Child development
Personal health	Creative dance	Educational psychology
First aid and CPR	Anatomy/Kinesiology	Adapted physical education
Physiology/Exercise physiology	Motor behavior	Tests and measurements
	Skills in analyzing movement activities	Computer utilization
		Program planning
		Teaching procedures
		Practicum experiences in schools
		Field experience with children in non-school settings

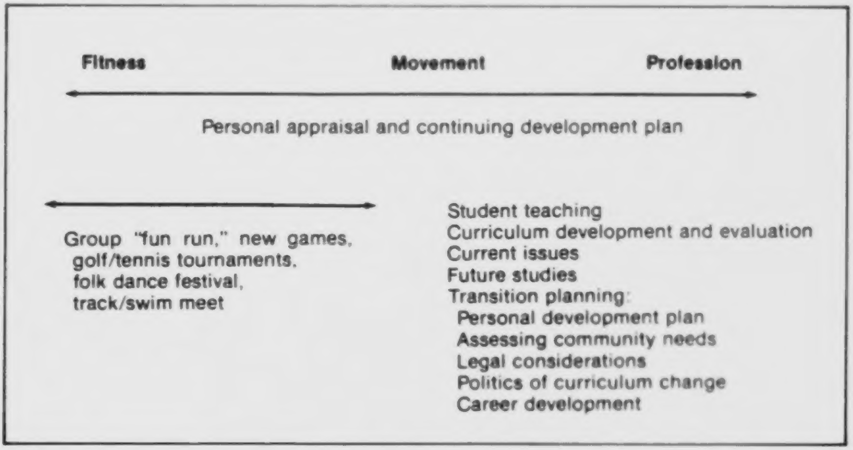
Figure 4. Topic Outline II: Individualized Coursework

The movement content would be offered in a variety of courses in developing selected motor performance skills. Sequential units in developing gymnastics, aquatics, games and sports abilities would provide for integrating progressively more advanced understandings of motor behavior. Sequences in creative dance activities and in other more structured dance forms would facilitate integrating anatomical and kinesiological knowledges. Courses would be sequenced to provide for integrating analysis and communications skills with the development of motor performance skills.

The development of knowledges, understandings, skills, and attitudes related to professional roles in physical education would include such courses as child development, educational psychology, adapted physical education, tests and measurements, computer utilization, program planning, teaching procedures, practicum experiences in schools, and field experiences with children in non-school settings. All of the required professional preparation courses specified in the local curriculum should be accompanied by appropriately individualized laboratory and field experiences.

The synthesis component (see Figure 5) is designed to integrate learning through all curricular levels and across the three key content areas. The primary goal of synthesis is to provide for personal integration of each graduate as he or she completes the preservice program and moves into a role of full-time professional responsibility. It is suggested that the ideal scheduling arrangement would permit three learning units: a pre-student-teaching planning seminar, the student teaching experience itself, and a post-student-teaching seminar. This senior level experience would combine small group seminars and an individually programmed and guided professional experience in teaching physical education in an elementary school.

A major feature of the synthesis component would be a personal appraisal and continuing development plan that extends across the three areas of fitness, movement, and professional growth. The remaining fitness and move-



Group "fun run," new games,
golf/tennis tournaments,
folk dance festival,
track/swim meet

Student teaching
Curriculum development and evaluation
Current issues
Future studies
Transition planning:
- Personal development plan
- Assessing community needs
- Legal considerations
- Politics of curriculum change
- Career development

Figure 5. Topic Outline III: Synthesis Component

ment content would be provided through a series of large group activities such as "fun runs," new games, golf and tennis tournaments, folk dance festivals, track or swim meets, and similar activities designed to permit students to enjoy participating together. Participants would also have additional opportunities in planning, organizing, and administering these events.

The synthesis component would emphasize the professional content. Student teaching would continue to be a major focus and a highly significant learning experience. Seminars would focus on curriculum development, evaluation, current issues, and futures studies. Clarifying physical education philosophy through small group discussions that permit students to exchange insights gained during student teaching, comparing and evaluating the different school programs experienced, and analyzing in depth such issues as the appropriate role of youth sports, all would help students to synthesize the learning experiences of the entire professional preparation curriculum. Major attention should be given to studying and analyzing futurists' writings, writing future scenarios for physical education, and developing skills for creating alternative futures.

Planning for transition to full-time professional responsibility would also be a part of the synthesis component. Planning would include a personal development plan for maintaining a physically active lifestyle; for keeping abreast of current research findings in child development, in the nature of human movement, and in the teaching-learning process; and for ensuring continuous professional development. Content in the planning unit should also deal with community needs assessment, legal considerations, the politics of curriculum change. Guidance in individual career development should be provided.

Up to this point, we have focused primarily on sequencing and on integrating curriculum content by conceptualizing three program levels in which the foundations and synthesis components would carry the major burden of integrating knowledges, understandings, and skills across the three content areas of fitness, movement, and the physical education profession. Key sequencing decisions would be made through determinations of sequences in each of these three areas. Individually scheduling other courses, including general education requirements and electives will follow guidelines presently used in the better programs. To ensure integration of the total academic content, however, most physical education faculties need to give more attention to relating performance to disciplinary knowledges and to the professional applications of the knowledges and understandings sought.

It was suggested earlier that integration of program elements might also be achieved in two other dimensions. In addition to integrating and sequencing academic content, we need to be concerned about personal and social integration through selection and sequence of individual and group experiences. Personal integration of individual students in the professional program for elementary school physical education specialists should be enhanced through a continuous personal assessment, goal setting, and evaluation process. The process should be guided by a competent and caring faculty advisor. The goal is probably facilitated by a system in which an advisor carries a reasonable advising load, works with the same student through most of the undergraduate program, and views his or her responsibilities as much broader than the routine registration and programming decisions. Before graduating from the program, a student should have developed sufficient self-knowledge, self-confidence, and self-direction to carry out a personal assessment, goal setting and evaluation process with sufficient skill and insight to continue these behaviors throughout his or her professional career.

The social dimension for program integration involves organizing the major students into learning teams. Assuming a fairly large enrollment in the major program, you might wish to randomly assign entering students to a particular advisor so that a group of six to 10 students are identified with others who already have reached upper division status. If the group preparing to be elementary school physical education specialists is not too large, all students with this particular goal might be assigned to the same learning team. The team faculty advisor would be responsible for helping to orient new students to the program through team affiliation and would give leadership for developing group enthusiasm and pride. More experienced members of the learning team might assist in academic learning experiences and individual participants could successfully experience a variety of increasingly mature group roles.

Learning teams might function within a class group to provide small professional seminar discussion groups. For events involving students at different grade levels, the learning teams could, as a major-club activity, function as competitive teams for fun runs or novelty tournaments or meets. The learning team advisor would have a special responsibility for assisting individuals in learning to play group roles effectively and in guiding group development. Thus, advising services would be strengthened through a dual focus and the process of integration and sequencing would be enhanced through a social dimension.

In summary, the proposed model for the professional preparation of elementary school physical education specialists incorporates the following five dimensions, each of which makes a particular contribution to the process of personal professional integration:

(1) Vertical sequencing is effected through three overlapping academic components or curricular levels, a foundations component, a component consisting of individualized coursework and laboratory experiences, and a concluding synthesis component including planning for transition to full-time professional work.

(2) Three content areas are developed through sequential experiences in fitness, movement, and the physical education profession.

(3) The curriculum is strengthened by continuous integration of knowledges and understandings with opportunities for application in real life performance situations.

(4) Individual assessment, goal setting, and evaluation are emphasized throughout the program with a formal assessment annually and at graduation.

(5) The integration process is supported through the organization of students into professional teams both horizontally by educational levels, and vertically to permit the additional learnings gained through working with peers who have less and greater experience and knowledge.

The process of personal professional integration can thus occur in at least five complenetary dimensions.

Developing Commitment to Teaching: The Professional Socialization of The Preservice Physical Educator

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Perhaps it is a commonly held belief that developing commitment in preservice teachers is easily accomplished. That is, because undergraduate trainees' love children, a primary reason for entering our field (Pooley, 1971; Woodford, 1977; Templin, Woodford, and Mulling, 1982), they enter physical education programs already possessing a high degree of commitment to teaching and to becoming exemplary physical education instructors. However, as I have learned through my studies, developing commitment involves a myriad of factors well beyond the love of children.

During a time in our history when public education has undergone intense scrutiny and criticism, commitment seems to be one critical issue to consider when assessing the various resolutions to such problems. However, it seems apparent that in a period when a significant percentage of teachers suggest they would select different careers if given the opportunity to start their professional preparation over (Darling-Hammond, 1984; National Education Association, 1981); when turnover in the teaching ranks is commonplace prior to the fifth year of teaching (Vance and Schlechty, 1983); and when teaching is claimed to be a secondary choice vocation or career contingency for many teacher trainees (Lortie, 1975); the task of developing teacher commitment may be a lofty and, in some cases, an unreal goal. The problem of developing commitment is probably compounded by other issues such as the decreasing attractiveness of teaching in terms of dwindling non-pecuniary rewards and the increase in the teacher's role as a bureaucratic functionary rather than as an autonomous, practicing professional. Equally, the relatively negligible impact of professional preparation on trainees who are, in many cases, less than desirable as prospective physical educators (Locke and Dodds, 1984; Templin, Woodford, and Mulling 1982; Weaver, 1984) further complicates the picture.

Finally, the problem of developing commitment in preservice teachers addresses the question, commitment to what or to whom? To the educational process? To one's profession? To that learned in one's training? To one's students? Obviously, with these concerns or road-blocks to developing commitment, the teacher educator may believe that developing commitment in the preservice teacher is next to impossible. I choose to believe otherwise. Yes, there are barriers, but skepticism or pessimism are not very useful in our desire to develop exemplary and committed practitioners. Teacher educators must maintain a sense of purpose if they are to develop it in others. They must remember that developing technical competence and commitment are more important for what they make possible than for what they are; that is, providing physical education students on all levels meaningful movement experiences and reinforcing not only the teacher's love of children, but the love of children learning. To these ends developing commitment to the teaching task is significant and as Locke, Mand, and Siedentop (1981) suggested a few years ago, it is the most important task within the professional preparation process. Quite certainly, teacher educators need to become better informed about the ways in which people become professionals and the route to role commitment.

PROFESSIONAL SOCIALIZATION

Any discussion of developing commitment must acknowledge the theoretical base to which commitment may be linked. Specifically, socialization theory serves as a useful framework in analyzing commitment and, certainly within a teaching context, it facilitates examining one's pretraining, preservice, and inservice commitment toward teaching. In general, socialization theory addresses the agents influential in acquiring skills, knowledge, and attitudes and, in an occupational context, involves learning the skills, knowledge, and attitudes associated with role performance.

It is the preservice or professional socialization dimension of commitment upon which this paper will focus. "Professional schools are charged with educating students to be skilled and committed workers who will faithfully do the work of their professions. In essence, their charge is to socialize students" (Simpson, 1979, p. 3). Physical education teacher education programs have the potential to be pivotal structures in moving a student from being a neophyte to being an old hand or mature practitioner. Any given program does so through its structure and the experiences it organizes. Students are inducted to learn the occupation's knowledge, skills, and approaches to work; and failure or success in the socialization process partially rests with the program.

Although the induction approach focuses on acquiring the professional role during professional education (Merton, 1957), it should be recognized that a reaction phase is also present within the socialization process; that is, it looks at student "identities and commitments that sustain them during their professional education and motivate them to complete it and go on to professional practice" (Simpson, 1979, p. 4). The reaction approach takes a dialectical perspective wherein students are involved primarily as their own socializing agents as they are trained for a professional role. It seems apparent that induction and reaction are somewhat interdependent and the degree to which a student identifies with or commits to teaching may be partially linked to his or her reaction and socialization toward the technical culture and professional ideology to which the student is exposed as a trainee. As Simpson (1979) states, "these positions need not compete. The main variables studied by both are essential aspects of socialization. Studying the acquisition of cognitive sets, apart from motivation to persist in a role commitment, is insufficient as a view of socialization" (p. 4).

So, the question of socialization asks whether the training program impacts technical knowledge and skill that persist across status transitions and whether it develops identities and commitments to teaching physical education that support the transition of the student into the professional role of the teacher. Although a more prevalent belief held by many teacher educators, as suggested before, is that we are the conductors of a low impact enterprise, "it is foolish to assume that all teacher education programs have low impact on all recruits" (Lawson, 1983, p. 8). Again, the possibility exists of induction and of a positive reaction in the form of technical competence and commitment, assuming that the structural and situational makeup of the entire training process (including the influence of the school settings in which students engage in field practice) facilitate these ends.

COMMITMENT: DEFINED

A term like *commitment* raises special problems regarding definition. It is a term we are familiar with in a variety of ways and, in short, is in the everyday language of our society with all the emotional overtones, special meanings, and hidden implications that it suggests. So much has been written about commitment—from Max Weber's (1949) classic essay "Science as a Vocation" to Chester Barnard's (1938) seminal work in his study of business executives to a multitude of organizational and occupational studies (Snizek and Little, 1984) conducted in the last two decades—that a theoretical and empirical foundation for its discussion has been laid. However, with this work has come so many definitions that we may be inclined as Hall (cited in Angle and Perry, 1981) suggests "to abandon the term altogether and deal instead with a set of concepts each focused on one or another aspect of commitment" (p. 1). The following discussion illustrates the definitional quagmire which exists.

Within an organizational context, Moore (1970) defines commitment as an "acceptance of appropriate norms and standards and identification with professional peers, and profession as a collectivity" (p. 8). Within the same context, while Barnard (1938) defines commitment as effort extended with the anticipation of future rewards that, in turn, satisfies a worker's desires, Buchanan (1974) defines commitment as a "partisan, affective attachment to the goals and values of an organization, to one's role in relation to goals and values, and to the organization for its own sake" (p. 346). In essence, Buchanan sees commitment in terms of identification, involvement, and loyalty.

Within a teaching context, commitment has also been defined in a number of ways. For instance, Lacey (1977) and Dreeben (1970) define commitment as the intention to make teaching a career. Defining commitment in this way points out an important distinction between personal identification with teaching as a job and entrenchment within its structure. Naturally, commitment may infer or, in fact, be entrenchment into a role, but one must be careful when using the word to describe both sets of motives. By so doing, one may obscure the fact that teachers may be pursuing a career in teaching either because they want to or because they feel they have no alternative.

Lortie (1975) suggests that commitment indicates "a readiness to allocate scarce personal resources (e.g., time, money, energy) to work" (p. 39). In this sense, it is synonymous with involvement and describes an individual's personal response to the perceived demands of teaching rather than an individual's identification with an occupation or career structure.

Based on her research with 93 elementary teachers, Nias (1981) suggests that commitment has four definitional bases:

1. *Commitment as Vocation*—involves a calling to teach, a missionary sense of direction derived from a love of children.

2. *Commitment as Profession*—a dedication to one's skills as a teacher, involving a continuous search to improve one's knowledge and abilities and to do the job really well. It should be noted here that McNamara (1972) found that highly committed preservice teachers were able to do the job really well as evidenced by a pattern of behavior which was progressive, and, whereby these individuals were more likely to make and follow detailed lesson plans, assess students on the basis of individual differences and improvement, they were less likely to treat students preferentially and demonstrated a willingness to work hard.

3. *Commitment as Identity*—teaching offers people the opportunities to be the sort of people they want to be.

4. *Commitment as Career Continuance*—a commitment to retain one's membership or participation in a group of social system.[1]

Finally, referring to a more general context, I would be remiss if I didn't address Becker's operational definition of commitment. Becker (1960) offers the foremost representation of a structural approach to commitment in relation to "side bets." Specifically, Becker suggests that individuals are influenced by investments and costs associated with certain lines of activity. Costs are activities that, if initiated, would prove detrimental to the person.

For example, quitting a job with no immediate alternative employment would be viewed as costly, while one's length of service and specialized education may be viewed as investments (valuables) in a certain occupation. It has been suggested that when the perceived costs of changing to another line of activity exceed the perceived rewards of change, the individual is committed (Thibaut and Kelley, 1959). From this reasoning, one may hypothesize that the trainees commitment to teach physical education would increase sharply at the point when transferring to another program would entail severe losses of investments. From example, a trainee may forsake a great deal of preparation in one area when transferring to a new major as well as losing the side bets of his or her subjective warrants attached to those opportunities once thought to be desirable.

Although Becker's definition provides one more view of commitment, I believe one must be cautious of this perspective in relation to real value typically attached to teacher training by trainees. That is, I have to question the extent to which professional preparation becomes valuable as I witness a high turnover from the teaching ranks, the interruption of study, the pursuit of occupations outside of teaching by our graduates, as well as the relatively low time investment required of teacher trainees.[2] What this line of thinking suggests for some students is that teacher education may be perceived as valuable in that it facilitates a variety of career and training options beyond the primary goal of preparation—to induct trainees into the field as competent and committed professionals.

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[1] Continuance alone need not indicate commitment because it may simply reflect a lack of qualification or of opportunities to change occupations (Moore, 1970).

Summary

In summary, people are committed when we observe them pursuing a consistent line of activity. "It is the pledging or binding of the individual to behavioral acts and its main effect is to make an act more difficult to undo, deny, distort, or reinterpret" (Kiesler, 1971, p. 157). Also, it is important to note, as Kiesler (1971) found that "commitment is a continuous concept rather than a dichotomous one. That is, people are referred to as more or less committed to some behavior, rather than being simply committed or not" (p. 30). Again, commitment is not important for its own sake but for what it implies—to bind people to exemplary performance as professionals, whereby their clients prosper.

DEVELOPING COMMITMENT: CONSIDERATIONS FOR TEACHER EDUCATION

With this brief theoretic and definition overview, the question remains about the possible approaches which may facilitate commitment within preservice elementary physical education students. Based upon personal intuition and extrapolation from the few social psychological studies within education, medicine, and industry which have addressed professional commitment, I shall look at the development of commitment in relation to recruiting students and some situation variables tied to the training process.

Recruitment

The question of who enters teacher education programs has been of great concern to many. I can well imagine that a depressingly large number of people seem to see truth in George Bernard Shaw's dictum—he who can does, he who can't teaches, or Woodie Allen's pronouncement which goes one step further; he who can't teach, teaches "gym." I, too, am concerned with the quality of our entrants, but my concern goes beyond the apparent inferiority of our student's academic capabilities. Specifically, my concern centers on such questions as:

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[2] Howey (1983) points out that "slightly less than 40 percent of a prospective elementary teacher's total undergraduate studies are developed to what could be construed as professional training" (p. 11). Prospective secondary teachers receive even less professional preparation and, in both cases, Howey (1983) suggests "that teacher education students receive precious little direct formal instruction in their quest to master the complex skills of teaching" (p. 12). Again, commitment is closely tied to mastering professional skills and it seems apparent in terms of Howey's analysis that direct formal instruction must be increased if mastery and commitment is to be developed.

are students really entrenched in the idea of becoming a teacher? For what purpose or reasons do they want to teach physical education? Are they committed to it?

Simpson (1979) states that "the first step in committing oneself to a role is thinking about it" (p. 80). I'm sure most entrants into professional preparation programs in physical education have thought about the role of the physical educator based on their observation apprenticeship or the countless number of hours they spent in school gymnasia and on playing fields. From this experience or "biography," students formulate a subjective warrant which enables each student to assess his or her suitability to enter a given occupation and to meet role requirements. The love of children, a desire to serve society, a love of movement as well as one's athletic skill serve as the subjective warrants of most physical education entrants (Woodford, 1977; Templin, Woodford, and Mulling, 1982).

Certainly these attributes are desirable but I wonder about the limited vantage point one has during one's pretraining physical education experience in fully understanding the technical culture and professional ideology of teaching (Lortie, 1975). In essence, one must ask whether or not the entrant's decision to enter our field transcends "imagination" or common sense and is based on a realistic picture of the process of becoming a teacher.

I am equally concerned with those students, although possessing the attributes mentioned, enter our field not so much out of commitment to these purposes, but enter as a function of various constraints, block aspirations, or as a career contingency (perhaps as a pathway to becoming an astronaut!). When teacher educators surmise that our students would rather be elsewhere and ask, "Do they really want to become physical educators?" they also must question and assess the entrants' commitments to teaching as well as figuring out whether strategies aimed at the development of commitment are worthwhile exercises.

The implications of such concerns suggest that beyond selecting trainees only on the merits of their academic credentials, teacher education programs should begin to adopt other criteria or screening tests that assess the reasons students select physical education as a field of study and possible career. Again, what is their sense of purpose? What is their conception of teaching? What dreams do they hold for our field, for public education, for our society? Do they have dreams for changing the status quo or are they wed to the past? Certainly the answers to such questions may provide some indication of a student's initial commitment to teaching and whether professional preparation is a credible or reasonable pathway for the entrant to follow. It seems logical that teacher educators can't begin to think about the development of commitment without knowing the baseline of commitment from which the training process will be initiated—if it is initiated at all for those individuals who should be gently redirected. Naturally, throughout teacher preparation, teacher educators must stay aware of the trainee's sense of purpose as a teacher and hence they must provide outlets, such as ongoing seminars from entrance to graduation, in order to maintain a continual dialogue between faculty and students.

I'd like to briefly comment about the academic qualifications of our students. First, as suggested before, it is an established fact that teaching attracts and retains a disporportionately high percentage of those with low academic ability and fails to attract or retain those with high ability (Vance and Schlechty, 1983). The weakest students transfer in, stay in, and the strongest transfer out. If the generalization that "the ability of recruits constitutes a significant restriction on what can be achieved with the training cycle" (Locke and Dodds, 1984) and if, as Bucher and Stelling (1977) found, that one's mastery of the skills and knowledge is the most important factor in the development of commitment, it seems crucial that we attract students with the academic capabilities to master the technical culture of our field. Again, one's subjective warrant is important, but means little if one is unable to acquire the skills, knowledge, and values critical to induction.

As Simpson (1979) states, "The profession is the guardian as well as the defender of the service it gives" (p. 20). It exercises its guardianship through restrictions on membership. In order to help facilitate the development of a masterful and hopefully a "committed" physical educator, we will have to become better guardians.

The Training Process

Focusing on the training process, the question becomes, what are the influential factors beyond the recruitment of more capable students that contribute to the development of professional commitment? I am somewhat cautious in proceeding here, for two reasons. First, I am reminded of the literature which suggests there is an absence of any programming effect in preparing physical educators because of the influence of pretraining experience or biography, the design of programs unrelated to the world of work, and because socialization is a continuing process—the commitments one develops as a preservice teacher may be quite different from those developed as an inservice teacher. Second, I agree with Bucher and Stelling (1977) who suggest that "the idea of a programming effect is sufficiently Orwellian to be a bit disgusting" (p. 264). Although I recognize and promote the idea that students need to acquire a variety of teaching skills, the implication that preservice teachers can be controlled or manipulated through programmatic design to come out with particular types of commitment or with a particular predisposition to the role of the physical educator is a little unsettling if those designs are for the benefit of teacher educators alone versus the well-being of prospective teachers and their future students.

Nonetheless, both structural and situational variables are criticial in the professional socialization process. Structural variables center on the way a program is designed and organized, the perspectives trainees are presented, the kinds of experiences they are involved in, and the skills and knowledge they obtain. Situational variables address the process by which socialization occurs. Such situational variables as role playing or work, role modeling, peer groups, coaching and criticism, conversion experiences, and status passages are influential in developing commitment (Bucher and Stelling, 1977). The following sections focus on role playing and role modeling.

Role Playing (Work). Role playing addresses the degree to which trainees have a chance to execute the role of physical educator, whether in a microteaching situation or in actual school gymnasia. It is apparent from the professional socialization literature (Brown, 1963; Brown, 1969; Bucher and Stelling, 1977; Simpson, 1979; Snizek and Little, 1984) that role playing activities are of outstanding importance in developing professional commitment for a number of reasons. Role playing encourages and may bring about a sense of mastery of the skills and knowledge required of a role. Equally, role playing serves as a means of validating one's training. It is important to recognize, however, that in order to assure the development of commitment, certain factors must be present. First, the trainee must have a sense of autonomy and self-responsibility in performing work. Second, the trainee must acquire the sense that she or he is the master of a role that "outsiders" don't know and can't perform. Finally, it has been found that students should be involved in role-playing situations quite early in their professional preparation if commitment is to evolve (Ryser, 1983).

Although the need for increased role playing in the form of field practica has been recognized in the last decade by most physical education professional preparation programs, we should not lose sight of the continued importance of clinical experiences in the public schools or at the university if commitment is to be developed. Research supports the fact that by assuming genuine and significant responsibilities with children, trainees' commitment will be enhanced as they see the application of their studies and if they are shown that their contributions can be appreciated by students and the other socializing agents of their preparation.

Martin Haberman (1983) endorses the significance of role playing, but does so by offering somewhat of a radical idea. Haberman (1983) has recommended completion of a bachelors degree after trainees have been placed "in a four-year career ladder as paraprofessionals, aides, assistant teachers, student teachers, and interns in schools—the very same schools where they would eventually teach" (p. 104). He suggests that through the delay of liberal arts or academic training, "trainees could be trained to be more proficient and competent (in behavioral terms) than any graduates of present university teacher education programs" (p. 104). Equally, such an approach (as is true of the conventional approach to field practice) serves as a mechanism for self-selection; it will allow trainees to make a decision about their commitment to a career in teaching. Such a reversal of the structure of teacher training certainly is an interesting possibility to consider if evidence supporting this alternative appears.

Expectations, Loyalty Conflicts, Quality of Work

Related to role playing are three other factors related to developing commitment: student expectations, loyalty conflicts, and the quality of the work experience.

Expectations. Experiences which allow trainees to test their expectations of the physical educator's role formulated in pretraining and training experiences are important in assessing their commitment to a role. Research has shown when expectations of an occupational role are exceeded, the likelihood of commitment is enhanced. In contrast, a significant negative discrepancy between expectations and reality may undermine long-run prospects for commitment (Brown, 1963).

The implications of this research suggests that teacher educators must be aware of the trainees' expectations for the role of physical educator throughout their training and these expectations must be assessed in relation to trainees' biographies, to what they have been exposed in their academic preparation, and what they will face during field experiences. Teacher education programs should not place a student in a position where reality shock upon entering clinical or field experiences serves to undermine the student's commitment to teach. Rather, a trainee would be placed in situations where anxiety over his or her ability to live up to expectations can be relieved. Role playing must activate an affiliative or affective tendency to teaching and promote individuals' commitment to teaching and to socializing agents who can furnish guidance and reassurance.

Another implication is that teacher educators must be sensitive to false prophecies; that is, commitment will be diminished if faculty prophecies for a trainee's life in the gym aren't actualized when the trainee enters the world of work. Hopefully, what is professed and prophesied by teacher education faculty not only provides a trainee realistic and motivational vision of teaching but a vision that is consistent from one faculty member to another.

Loyalty Conflicts. Closely associated with expectations is the issue of loyalty conflicts. Socialization is a continuing process, and there is no reason to assume that trainees will be impervious to the influence of situations and relationships in which they subsequently become involved. This process, however, places trainees in a position where they are torn between learning and surrendering to a new environment and suspecting and mistrusting it. As suggested before, if loyalty conflicts arise wherein an individual's role definition is continually challenged or threatened, the individual's commitment to the role may well be undermined.

Thus again, teacher educators must be sensitive throughout students' training to the students' conceptions of teaching—to the impact of training experiences on their knowledge, skill, and attitudes. More importantly, we must prepare students for transitions from which conflicts may arise. As a student moves from course to course or, particularly, from the training program to a field experience (where reality shock becomes more of a possibility), the implications of each transition should be examined and we should begin to ask ourselves if our students have various strategies, such as those offered by Colin Lacey (1977) to cope with the socializing effects of various situations.[3]

Quality of Work. Another fact which is critical to developing commitment is the quality of role playing activity. One may hypothesize that if the work of an individual is challenging and stimulating such that it bolsters the self-image and gratifies the achievement needs of the individual, it will positively affect the individual's commitment to a role (Brown, 1969). If it seems trivial or insignificant, the opposite can be expected. Hence, when role playing activities have meaning and reinforce not only a student's decision to enter teaching, but validates the student's training, commitment will be developed. Teacher educators must be sensitive to quality control when we place our students in various field experiences. They must avoid conflict and seek situations that are congruent with and supportive of the training perspective.

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[3] Lacey (1977) has found that students are engaged in behavior by employing various strategies (strategic compliance, internalized adjustment, and strategic redefinition) reflective of autonomy and self-direction versus dependence, passivity, and submissiveness to the socializing attempts of others.

Of course, this theme may apply to the total training process. We must get away from those programs which are described as "undemanding,... often dull," and "too obviously unrelated to the world of work" (Locke, 1983, p. 299) to programs that reflect just the opposite. Obviously, the commitment we have as teacher educators to positively influence both the structural and situational variables of our programs may, in turn, influence our students' commitment to teaching. I refer you again to the recommendations of Locke, Mand, and Siedentop (1981) whereby such a goal may be realized.

Role Modeling

One further consideration in developing commitment, which only has been implied thus far, is the importance of role models for our trainees. In comparison to role playing, role modeling does not have the same degree of influence on the trainee's development of commitment but this is not to suggest that modeling isn't influential. For example, Bucher and Stelling (1977) found that trainees did use faculty as models and did look very much like many of their mentors while role playing. The same may be true of physical education students who model the behavior of their university mentors—behavior which, I might add, isn't necessarily consistent with those behaviors verbally professed by teacher educators for role execution by trainees, but which is often consistent with the implicit behavior of teacher educators.

What do I mean? For example, such an individual might espouse the merits of instructional diversity within a methodology class yet rarely, if ever, model diverse teaching styles. Obviously, the teacher educator is sending one message that calls for innovation and another, tacit message that typically promotes the status quo. It is the second message which I believe, as do others (Howey, 1983; Smith and Orlosky, 1975; Zeichner and Tabachnick, 1981), is modeled by our trainees and mirrors and reinforces the custodial nature of school programs.

Naturally, students are able to selectively monitor contradictory messages when developing their commitment to a certain behavioral repertoire, but my plea is for consistency in the explicit and tacit lessons we teach. If teacher educators agree about the technical culture and professional ideology to be transmitted to trainees, their behaviors must reinforce what they profess. It is all too apparent that what is happening now is the reinforcement of a trainee's traditional definition of teaching through her or his course work and practicum experiences as well as the trainee's pretraining experiences, and I wonder if this is the end product toward which we wish to socialize our students.[4] As Lawson (1983) states, "the concept of successful induction is one in which a recruit's inaccurate subjective warrant (What is versus what should be) is replaced by a new self-image forged out of new ideological commitments and newly acquired knowledge and skill" (p. 12).

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[4] It has been suggested that "goodness of fit" between the traditional orientations of teacher educators and a trainee's traditional definition of instruction formulated during the student's pretraining experiences, reinforces the trainee's attitudes and behaviors towards teaching.

CONCLUSION

In conclusion, I believe that the future of public education—especially of physical education as we might like to see it—depends greatly on the willingness of the men and women responsible for the structure of both public school education and teacher education to forsake their short-term interest for the long-term improvement of the educational process. I am convinced that the "right" students, trained by the "right" mentors in the "right" ways and who enter schools and work with the "right" teachers committed to educate children in the "right ways," can bring about change.

In order to bring about such a change, I agree with Locke and Dodds (1984) suggestion that we "think small, find company, and ask questions" and that we narrow the scope of action in teacher education to *"this student, my class, our program, these cooperating teachers, and that school"* (p. 30). Of course, we must also narrow the scope to examine our own individual skills, knowledge, values, and, of course, our commitments as teacher educators.

Commitment may be developed and teachers can translate that commitment into sound programs of physical education in our schools. There is living evidence that such a belief is possible; elementary physical educators such as Beth O'Brien from Amherst, Massachusetts or Robert Leach from Eugene, Oregon or Dolly Lambdin from Austin, Texas all serve as role models of excellence in teaching (Graham, 1982) and most certainly as educators committed to the growth of their students. They possess not only a love of children, but a love of and commitment to children leanring.

In an age of latch-key children and single parenthood, in which one-fourth of all the children under six in our country are living below the poverty line, in which too many children are the victims of abuse and divorce, and in which academic achievement of our youth continues to rank below that of children from other post-industrial nations (Bronfenbrenner, 1984), it is time to commit and recommit ourselves to pursuing a better life and education for our children. We have an incredible responsibility and that's the challenge that stimulates my commitment as a teacher educator. It is the challenge that prospective teachers must confront head-on. It is the challenge that we must influence bureaucrats to recognize and act upon if structural change is to come about in the recommitment to positive child development.

Yes, we must think small today, but let's continue to dream big dreams—dreams which direct our sense of purpose toward a brighter future.

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The Hidden Curriculum in Teacher Education

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The term *hidden curriculum* is frequently used in curriculum literature, but its wide adoption as a slogan has done little to clarify its meaning and theoretical significance. Definitions of the term *hidden curriculum* vary based both on what is presumed to be taught, that is, the content of the hidden curriculum, and on the depth to which it is hidden. In this paper, *hidden curriculum* will be used to refer to those aspectrs of schooling which are not part of the formal, explicit curriculum but which have an effect on students. This is, the hidden curriculum consists of "what is taught to students by the institutional regularities, by the routines and rituals of teacher/student lives . . ." (Weis, 1982).

To understand the hidden curriculum one must study the lived culture of the school or university and analyze its relationship to the structure of the larger society. Such research begins with an analysis of meaning utilizing ethnograhic and phenomenological studies. A researcher not only describes the patterns of behavior observed but also examines the meanings these events have for the participant. The analysis of meaning is combined with an analysis of ideology (Apple, 1978). Educational institutions are viewed as containing the potential for both reproduction and transformation of society. The fundamental goal of research on the hidden curriculum is not only to understand the experience of schooling but also to comprehend the relationship between schooling and society.

In contrast to the positivist approach, which assumes research to be value-free, the critical theory perspective underlying most hidden curriculum work sees all knowledge including research as socially constructed (Berger and Luckmann, 1966) and therefore begins with a clarification of the standpoint of the researcher. The analysis which follows is based on a feminist perspective. My asssumption is that we live in a patriarchal society in which inequalities between men and women are maintained both by force (laws and practices which discriminate against women) and by ideology (beliefs about gender which are accepted by men and women). Gender interacts with race, class, and age to create a social system which is inherently unequal and which must be transformed if a truly just society is to be attained. The hidden curriculum in schools and universities may be a powerful force for either the reproduction or transformation of society.

Zeichner and Tabachnick (1981) have summarized three views on the relative influence of schools and universities in the socialization of teachers. The prevailing view is that universities have a liberalizing effect on prospective teachers but these progressive or liberal attitudes are "washed out" by school experience. An alternative view is that prospective teachers are socialized primarily through the internalization of beliefs based on observations of teachers before entering college and that teacher education has little, if any, impact on them. The third possibility is that teacher education institutions encourage students to affirm liberal slogans, but that both universities and schools expose students to educational practice which is inherently conservative. Zeichner and Tabachnick (1981, p. 10) suggest that examination of these alternatives will require "research in teacher education to turn its attention to closer and more subtle analyses of the impact of university courses, symbols, procedures, and rituals upon the professional perspectives of prospective teachers."

This paper examines literature regarding the hidden curriculum in teacher education and analyzes the implications of this work for the preparation of physical educators to teach children. A growing body of literature describes the hidden curriculum in schools and much of that literature examines the working lives of inservice teachers. However, relatively little research describes the hidden curriculum in teacher education programs. Although comprehensive ethnographic studies have been done describing the professional preparation of doctors (Becker et al., 1961) and of nurses (Oleson and Whittaker, 1968), no comparable study of teacher education has been published. Aspects of a two-year ethnographic study of teacher education students at the University of Houston have been reported (Ginsburg and Newman, 1982; 1983; Ginsburg, 1984), but that study did not include physical education students.

The following discussion focuses on three components of the hidden curriculum in teacher education: knowledge and the educational process, the work of teachers, and social relationships. Because of the absence of research on the hidden curriculum in teacher education and especially in physical education teacher education, some of my comments will be speculative. My hope is to stimulate both reflection and action on these issues.

KNOWLEDGE AND THE EDUCATIONAL PROCESS

The ways in which teacher education programs are organized and conducted communicate a view of what knowledge is worth learning and of the characteristics of knowledge itself. Berlak and Berlak (1981) identify three dimensions in which conceptions of knowledge differ. One dimension contrasts knowledge as given and having an objective existence with knowledge as problematical and socially constructed. A second dimension contrasts knowledge tied to personal experience with public knowledge based on impersonal standards. The third basis for analysis, the holistic-molecular dimension, contrasts "active construction of meaning versus accumulating discrete parts properly ordered" (Berlak and Berlak, 1981, p. 151).

A number of writers have suggested that teacher education programs convey an image of knowledge as certain, objective, and discrete rather than problematic, subjective, and holistic (Giroux, 1980; Greene, 1977; Horton, 1972). A primary means by which this image is communicated is separating reflection from action (Bartholomew, 1976; Gitlin, 1982). By focusing on how things are to be done rather than considering what is to be done and why, teacher education programs perpetuate a perspective which is essentially conservative because it fails to provide prospective teachers with the conceptual ability to question existing practices and the potential to transform that reality (Giroux, 1980; Gitlin, 1982).

Research in some teacher education programs has supported this analysis of the image of knowledge conveyed. Ginsburg and Newman (1983) found that both the formal and the hidden curriculum of the competency-based teacher education program at the University of Houston treated the content of the curriculum as given, not as something about which teachers have to make decisions. The focus was on instructional strategies and techniques of presenting or delivering the given curriculum. The modularization of the program also encouraged students to view knowledge as fragmented and molecular. An analysis of Tabachnick, Popkewitz, and Zeichner (1980) of the student teaching experience at a midwestern university indicated that university supervisors focused conferences and seminars on techniques of teaching rather than on discussions of broader educational issues.

Exceptions to this view of knowledge existed even within the programs described. Some university faculty raised controversial issues and encouraged students to examine personal experiences and values. However, for the most part, preservice teachers were educated in how to take a prescribed curriculum and deliver it with a variety of techniques. The teacher education students' reactions to the given curriculum varied (Ginsburg and Newman, 1983). Some saw it as making their situation survivable while others disliked the perceived constraint but did not feel they could change it. In both cases, the status quo in schools remained unchallenged.

One aspect of the image of knowledge is especially noteworthy for physical education teacher education programs—the separation of the subjective experience of moving from the objective experience of studying about movement. Separation of the subjective and objective reflects and reinforces the separation of the private and public domains of life. Such a division sees the public domain of work and politics as the man's world and the private realm of family and emotion as the women's sphere and is at the heart of the patriarchal system (Eisenstein, 1981). The separation is ideologically represented and supported by the dualisms of mind and body, instrumental and expressive activity, and work and play. To the extent that physical education programs reflect such dualisms they may reinforce the sexual division of labor in society.

Within the physical education field, dance educators and proponents of movement education seem to have most successfully resisted the separation of the experience of moving from the experience of studying about movement. Rather than neatly packaging the curriculum into activity courses and theory courses, they have integrated activity and theory in ways that communicate a more holistic view of both subject matter and student.

THE WORK OF TEACHERS

Examinations of teachers' working lives reveal two persistent but seemingly contradictory themes: a hierarchical power structure and an ideology of professionalism (Helsel and Krchniak, 1972). Teachers work in bureaucratic organizations in which power is hierarchically ordered from administrators to teachers to students. At the same time, educators have sustained a belief system that views teachers as autonomous professionals who have the right to regulate and control their own activities.

Two questions are addressed in this analysis: (1) To what extent does the hidden curriculum of teacher education reinforce one or both of these themes? and (2) How do hierarchical authority and the ideology of professionalism serve to reproduce or transform existing society?

The hierarchical power structure is visible to teacher education students at two levels. Most apparent is the power an instructor wields over them through assignments, attendance requirements, testing, and grading (Hoffnung, 1982). The constraints under which instructors operate are somewhat less evident. University professors generally are viewed as having greater autonomy and professional status than public school teachers but Ginsburg and Newman (1983) found that teacher education instructors often made explicit references to constraints placed on them by state certification regulations, accreditation agencies, and university requirements. While the bureaucratic nature of schools rarely is examined directly, student teachers are frequently given messages to conform to school practices and not "make waves" (Ginsburg and Newman, 1983; Tabachnick, Popkewitz, and Zeichner, 1980). The hidden curriculum clearly reflects the hierarchical power structure of schools and universities.

The ideology of professionalism is often included in the formal curriculum of teacher education programs but is also visible in the hidden curriculum in both the labels and slogans used (e.g., professional preparation, introduction to the profession, professional organizations) and in the emphasis on teacher responsibility and accountability. The accountability movement is an interesting manifestation of the contradictions of hierarchical control and the ideology of professionalism. To hold an individual teacher accountable for the quality of education implies that the teacher has the power and autonomy to regulate the educational activities being evaluated. However, teachers generally do not have the autonomy to determine the criteria for success. The teacher education program, like the school as a workplace, portrays teachers as autonomous professionals and as bureaucratic employees. Preservice teachers are encouraged to believe that if they act like professionals, they will be recognized and treated as such by the public and their employers (Ginsburg, 1984).

Both the hierarchical power structure and the ideology of professionalism have implications for the reproduction of the present society. Indeed, some have argued that one of the primary lessons of the hidden curriculum for students is the acceptance of impersonal authority (Dreeben, 1968; Jackson, 1968; Bowles and Gintis, 1976). Apple (1983) suggests that educational authority relations have been formerly patriarchal, having male dominance in leadership positions and in teaching positions of higher status. University teacher education programs seem to reflect a similar power distribution. He also suggests that such new techniques of scientific management as behavioral goals and curriculum, competency-based instruction, prepackaged curricula, and systematic testing, supplement or augment patriarchal authority with forms of control that are even more efficient. This increased emphasis on technical aspects of a teacher's work has both de-skilled teachers by separating conception from execution and intensified their job by increasing the quantity of work to be done. Apple (1983) notes that, at least in elementary schools, this has largely been an action by male experts to intervene in the daily practice of a largely female work force.

The ideology of professionalism both supports and serves as counterpoint to the power structure. It has served as an important rallying point in the struggle against male dominance, a part of a "complex attempt to win equal treatment, pay, and control over the day-to-day work of a largely female labor force" (Apple, 1983, p. 61). At the same time, the concept of professionalism has convinced teachers to accept intensification and technically sophisticated interventions in their work as signs of increased professionalism. Teachers generally have not questioned the legitimacy of the rules of professionalization, a process which stratifies groups of workers by status and power, instead, they have accepted the need to strive for more secure professional status. Gyarmati (1975) suggests that we cannot study the professions on their own terms as politically and ideologically neutral groups whose sole purpose is to offer important services that society needs; we must view this definition as a legitimating doctrine of the privileged social, economic, and legal status of the professions, a status to which teachers aspire. The strategy most commonly employed to acquire involved professional status is a combination of two measures: "an increase in the number of years of study required to obtain the professional degree, and the inclusion of more and more abstract and esoteric subjects in the syllabus, regardless of whether they are related to what the professional person will actually do in practice once he has obtained his degree" (Gyarmati, 1975, p. 646).

What has all of this to do with the hidden curriculum in physical education teacher education? First, let us examine the issue of authority. The working lives of physical education teachers seem to be dominated by what Earls (1981) has labeled the athletics syndrome. Many individual physical educators serve both as teachers and coaches. Large numbers are recruited into the profession because of their interests in coaching (Bain and Wendt, 1983; Segrave, 1981). Hierarchical authority relationships and an individualistic, competitive performance environment often characterize such recruits' teaching as well as coaching behavior (Kollen, 1981; Earls, 1981). The hidden curriculum in teacher education programs may contribute to continuing the athletics syndrome to the extent that it emphasizes traditional sports and competition and perpetuates what some have called motor elitism. This issue is of particular concern to feminists. Willis (1982) argues that competitive sports performance serves to reinforce ideology about male supremacy. He and others (Felshin, 1974; Heide, 1978; Boutilier and San Giovanni, 1983) have suggested that feminists may need to redefine sport and its standards of performance if sexism is to be eliminated. Teacher education programs for elementary physical education seem a likely place for the redefining process to begin.

Some examination of the concept of professionalism within physical education also seems in order. Women have been reported to be more professionally oriented in teaching than men (Helsel and Krchniak, 1972), and the concept of the professional has played an important role in the struggles of women teachers against male dominance (Apple, 1983). Within physical education, women have indicated greater interest in teaching (Bain and Wendt, 1983) and have demonstrated more active involvement in teaching than men (Bain, 1976; 1978). The professionalism doctrine may have served both to enhance women's teaching activities and to legitimate their exclusion from athletics.

Interestingly, physical educators have had greater autonomy as teachers than as coaches but it seems to be an autonomy born of neglect, not of respect. While administrators and the public look over the coach's shoulder and judge every move, they often demonstrate a complete lack of interest in what the physical education teacher does. Coaches have had greater status than teachers but employment practices would indicate that physical educators have not claimed coaching as an exclusive field based on training and professional expertise.

The issue of "professional monopoly" or exclusive right to practice is complex as it applies to elementary physical education. Although professional organizations and most certification agencies have endorsed the concept of the physical education specialist, many elementary schools do not employ such specialists. Teacher education programs have implicitly recognized and perhaps accepted this reality by requiring all elementary classroom teachers to take a two- or three-credit physical education course and by certifying most physical education specialists to teach secondary only or K–12 but certifying very few to teach just elementary. The message seems clear—any teacher can teach physical education to children; a specialist is not really required.

Physical education's span of control within public schools seems limited, but efforts are being made in colleges and universities to increase its professional status. Including more abstract and esoteric subjects and disassociating physical education from education and aligning it with sports medicine can be viewed as efforts to increase professional status. These measures may be increasing professional influence in athletics and in adult fitness programs, but their effect on the professional status of physical education teachers is unclear. Coaches and fitness directors deal with small, select groups of motivated individuals with a clearly defined purpose, a situation which may benefit from applying scientifically based technical expertise. In contrast, teachers deal with large heterogeneous groups settings which require them to focus on interpersonal interactions and establishing classroom control (Denscombe, 1982). Placek (1983) found that the physical education teachers she studied defined teaching success in terms of keeping students busy, happy, and good. The increasing scientific emphasis in physical education professional preparation programs may be irrelevant to the tasks confronted by the physical education teacher.

Social Relationships

Perhaps the most important component of the hidden curriculum of any educational institution is the view it reveals regarding relationships among individuals and groups. Because schooling is a social process, it has the capacity to model social relationships. Because it is a socialization process, it has the capacity to project explanations and remedies for the inequalities which exist within education and society.

The extent to which teacher education programs model equity or bias based on gender, race, class, or age varies. Sadker and Sadker (1980) analyzed sexism in teacher education textbooks and found that they were characterized by omission and imbalance in their treatment of women. A similar analysis of physical education textbooks might prove interesting. Although the sex segregation of physical education teacher education programs is now gone, remnants of the pervasive sexism on which it was based remain. Areas traditionally associated with and taught by women, such as dance and elementary physical education, often are given only a peripheral role in the program. As in the university at large, women in physical education frequently are concentrated in the lower ranks and in the social sciences and methods courses. The scientific aspects of physical education generally are viewed as more prestigious and often are dominated by men. In general, men hold most of the administrative positions in merged physical education departments. Duquin and others (1984) state that over 70 percent of professional women physical education surveyed report experiencing some inequity in their professional life because of their sex.

Racism is also a concern within the field of physical education. Blacks and other non-white people are highly visible as varsity athletes on most campuses but are conspiciously absent from the ranks of the professoriate in physical education. Physical education departments and athletic programs often have an uneasy partnership which permits athletes majoring in physical education to stay eligible but not to graduate, a partnership which is clearly visible to the students in our teacher education programs. While this compromise does not allow students with inadequate preparation to become certified to teach, it often does make physical education a party to the exploitation of athletes, many of whom are black.

Students in teacher education programs encounter considerable evidence of inequalities within education and the society. They also encounter messages that help them develop explanations of why such inequalities exist. Ginsburg and Newman (1982) found that teacher education students' perceptions of why social inequalities exist fell into three categories. The majority of students interviewed saw status inequalities as the result of individual choice in a neutral system, that is, those with less wealth and power simply lack motivation and drive. A second group of respondents indicated that inequalities resulted from individual prejudices and saw the schools as crucial in changing people's attitudes. A small number of preservice teachers attributed inequalities to the fundamental structure of the political and economic system and suggested that schools need to teach students to analyze and improve the society.

Perhaps the most potent message teacher educators send about the sources of inequity is their own action to remedy the problem. Feminists have suggested that teachers may be crucial agents for change in society, especially women teachers who have begun to understand the effects of sex bias on their own lives (Howe, 1973; Mitrano, 1981). Yet Duquin and others (1984) found that less than a majority of professional physical educators places a high priority on being an example of political activism or supporting women's rights. Teacher educators' neutrality and lack of involvement may be sending a message that the system is indeed neutral and fair and that inequities are deserved.

CONCLUSION

This analysis has focused on the hidden curriculum communicated to students by the rituals and regularities of the teacher education program. These routines and the assumptions that underly them often are taken for granted, often lie at what Apple (1979) has called "the bottom of the brain." My hope is that this discussion has raised them to a new level of consciousness.

Any discussion of the relationship between schooling and society runs the risk of being too deterministic, of implying that the patterns of behavior observed must inevitably reproduce the existing society. Such determinism is to be avoided. Apple (1982, p. 14) argues that "schools are not 'merely' institutions of reproduction, institutions where the overt and covert knowledge that is taught inexorably molds students into passive beings who are able and eager to fit into an unequal society." He suggests that "student reinterpretation, at best only partial acceptance, and often outright rejection of the planned and unplanned meanings of schools, are more likely." For this reason, schools contain the potential for both reproduction and transformation of society.

One role of the research on the hidden curriculum is to identify "gaps and tensions" in the process of social reproduction which provide possibilities for political action (Giroux, 1981a). Giroux (1981b) states, "While it would be naive and misleading to claim that schools alone can create the conditions for social change, it would be equally naive to argue that working in schools does not matter."

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CLOSING ADDRESSES

Commitment to Action: Looking At The Future Through Rear View Mirrors

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Tommy is six years old. On August 27, he started first grade. His school has a physical education specialist. Tommy had physical education on his first day of school. He played Duck, Duck, Goose.

This is a true story. Tommy's teacher may have studied with one or more of us. I have never met Tommy's physical education teacher so I don't know where she went to school.

This story raises three interesting and related questions: 1) Is there documentation to support including Duck, Duck, Goose in an elementary school physical education curriculum? 2) Are we in unanimous accord that Duck, Duck, Goose is a purposeful and worthwhile educational game for children to be playing in physical education class? 3) Is it possible that Tommy's teacher was one of our students that we never taught to teach the game of Duck, Duck, Goose and yet she teaches it to her students every year?

As I have posed these questions you no doubt have formulated your own answers. My answers are "yes and no,""I doubt it," and "quite possibly." In the remainder of the paper I elaborate on each of these responses.

First, however, I want to express a caveat. I am going to generalize—about teacher educators, about physical education specialists, about public school administrators, about classroom teachers, and about children. Thankfully, I am aware of exceptions to every generalization I am about to make. You are also aware of exceptions. These exceptions give us hope and confidence in our efforts. I am of the impression, however, that these exceptions are still a minority.

PROGRAM DOCUMENTATION

Is Duck, Duck, Goose a good game? Not for fitness certainly, hardly for skill development, but it may serve to enhance cooperation or as an enjoyable respite for six year olds from sitting at a desk. But do we know that Duck, Duck, Goose (or any game for that matter) enhances cooperation or enjoyment among children. Where's the evidence?

We don't have the evidence. It is blatantly nonexistent in physical education. Up to this time, many school programs have been based more on testimonial, enthusiasm, personal beliefs, and the latest movie fad than on motor development, systematic documentation of learning, or field-based research. The fact is that there isn't a shred of scientific evidence to support including Duck, Duck, Goose in the elementary school curriculum. Yet it endures; oh, how it endures.

The message is clear. The time has come to begin to document our efforts. The research on teaching physical education has emerged quickly and grown rapidly (Locke, 1983; Pieron, in press). The next logical step is evaluating whether physical education and teacher education programs are making differences—for teachers and for children. When I consider the rapidity with which the research literature on teaching physical education has grown, I can't help wonder if we aren't approaching what Keyes (1982) described as the "Hundredth Monkey Phenomenon." This phenomenon was described by a group of scientists who had been observing the behavior of a breed of monkeys on several Japanese islands. In Keyes words (pp. 11-17):

> ... The Japanese monkey, Macaca Fuscata, has been observed in the wild for more than 30 years.
>
> In 1952, on the island of Koshima scientists were providing monkeys with sweet potatoes dropped in the sand. The monkeys liked the taste of the raw potatoes, but they found the taste of the dirt unpleasant.
>
> An 18-month-old female named Imo found she could solve the problem by washing the potatoes in a nearby stream. She taught this trick to her mother. Her playmates also learned this new way and they taught their mothers, too.
>
> This cultural innovation was gradually picked up by various monkeys before the eyes of the scientists who were observing the monkeys.
>
> Between 1952 and 1958 all the young monkeys learned to wash the sandy sweet potatoes to make them more palatable.
>
> Only the adults who imitated their children learned this social improvement. Other adults kept eating the dirty sweet potatoes.
>
> Then something startling took place. In the autumn of 1958, a certain number of Koshima monkeys were washing sweet potatoes—the exact number is not known.
>
> Let us suppose that when the sun rose one morning there were 99 monkeys on Koshima Island who had learned to wash their sweet potatoes.
>
> Let's further suppose that later that morning, the hundredth monkey learned to wash potatoes.
>
> THEN IT HAPPENED!
>
> By that evening almost everyone in the tribe was washing sweet potatoes before eating them.
>
> The added energy of this hundredth monkey somehow created an ideological breakthrough!
>
> But the most surprising thing observed by these scientists was that the habit of washing sweet potatoes then spontaneously jumped over the sea.
>
> Colonies of monkeys at Takasakiyama began washing their sweet potatoes!
>
> Thus when a certain critical number achieves an awareness, this new awareness may be communicated from mind to mind.
>
> Although the exact number may vary, this Hundredth Monkey Phenomenon means that when only a limited number people know of a new way, it may remain the conscious property of only those few.
>
> But there is a point at which if only one more person tunes-in to a new awareness, a field is strengthened so that this new awareness reaches almost everyone!

One wonders when the awareness we need to begin documenting the results of our programs will reach the hundredth teacher educator. When this happens, our programs will no longer be based on testimonial but on empirical evidence. It may be soon, we now have both the expertise and the personnel to ask and answer questions about the value of Duck, Duck, Goose. Once the documentation becomes available, the argument no longer becomes solely philosophical. It also becomes an argument based on scientific evidence.

As teacher educators, our questions extend beyond the value of a single game or activity for children. Our interests continue to focus on the effect of programs on children (content and approaches combined) but our interests also lie in preparing teachers. The following questions are probably typical of those asked by many teacher educators:

What is the impact of direct instruction on the affective and cognitive domains? Does it enhance skill development for closed skills? For open skills?

Are movement education programs resulting in the professed outcomes?

Are physical education programs that have a strong fitness emphasis enhancing the physical fitness of children? What effect are such programs having on the attitude of children about their bodies and physical fitness?

Are children who participate in sports education programs more or less skilled than children whose programs consist of low organized games like Brownies and Fairies and Red Rover?

And, most importantly, can we teacher educators communicate (this implies practicing teaching skills) this information to current and future teachers so that it is reflected in their physical education programs for children?

As teaching research consumers we know that these questions are more than curriculum questions. They can only be answered by carefully examining the results of interaction between students and teachers on the playgrounds and in gymnasiums. One of the most logical paradigms for answering questions like these is currently being used by Jane Stallings (1984) and her colleagues. They are in the second year of a three-year study designed to assess the impact of an inservice program for classroom teachers who were taught to employ the Madeline Hunter model.

Stallings' paradigm has great utility for us because it is a teacher education model rather than simply a teaching research model (Locke and Dodds, 1981) (see Figure 1). It assumes, for example, that teachers are prepared to employ a specific set of skills for accomplishing some very clear goals. Essentially, the research paradigm has five different parts.

The first part of the model, and one I suspect we all ascribe to, is the development of an overarching theory. The theory includes a philosophy; purposes; and a clear, observable statement of the desired ends or outcomes of the teaching process.

Once a theory has been formulated, the next step involves developing a program designed to prepare teachers to employ the theory. In effect, this is the teacher education phase. It may be a preservice program at a university. It may be an inservice program in a school district. The goals are the same, however—to prepare teachers to translate a theoretical model into practice in a school setting.

Determining whether teachers are actually employing the model is the third step. Typically, this is done by using an observation system that has been adopted, adapted, or developed to measure the teaching behaviors that are

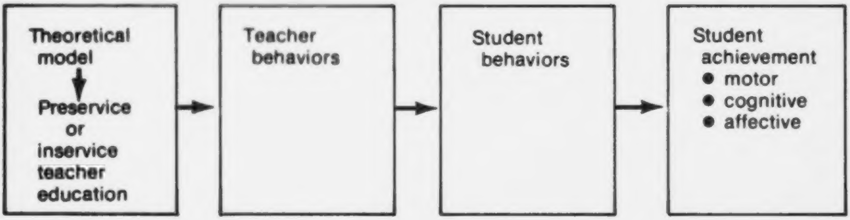

Figure 1. Stallings' Model For Documenting Teacher Education Program Effectiveness.

considered desirable in the model's theory statement. For example, a Flanders-type system (Cheffers, 1983) might be used to document teacher–student interaction for a theory that valued problem solving and teacher indirectness.

Measuring student behavior is the fourth step. Measures of student activity or time-on-task, such as the Academic Learning Time system (Metzler, 1983), are often used to quantify student behavior. The last step is to measure student learning. If, in fact, teachers are consistent with the theoretical model and the students in their classes are performing as implied in the model, then one assumes that the desired motor, cognitive, and affective outcomes will be achieved. Although it seems obvious, it is important to state that the product or outcome measures used to measure student improvement or achievement need to be consistent with the goals expressed in the theory statement. It is illogical, for example, to use physical fitness as a measure of the effectiveness of a program if fitness was never intended as a desirable outcome of the teaching process.

For many, Stallings' model makes sense. It is a logical and appealing way of determining the success of a program of teacher education. It is also impractical for many of us to implement completely. A lack of funding, a lack of time, a lack of resources and a lack of philosophical agreement among colleagues may effectively preclude the implementation of the complete model. It doesn't preclude, however, work in one or more phases of the model.

There are many observation systems waiting to be used in some meaningful way (Darst, Mancini, and Zakrasjek, 1983). There are also fundamentally sound and philosophically consistent theories of physical education for children (Figley, Mitchell, and Wright, 1977; Graham, Holt/Hale, McEwen, and Parker, 1980; Logsdon, Barrett, Broer, McGee, Ammons, Halverson, and Roberton, 1984). However, generally accepted measures of student outcomes except fitness for children's physical education are lacking. So are studies that focus on the relationship between teacher and student behaviors. This model begs for collaboration and cooperation among colleagues as a way of beginning to document the effectiveness of our teacher education programs.

Will evidence like this make a difference? Definitely. My basis for this answer is the "Daily Physical Education" research project that began in the 1950s in Vanves, France and since has spread throughout Southern Australia and several Canadian provinces (Baker, Morley, O'Neill, and Wright, 1984; Carre, 1979; Martens, 1982; Shepherd, Volle, Lavallee, LaBarre, Jecquier, and Rajie, 1982; South Australia Education Department, 1981). We can provide a logical argument that children need physical education daily. When this argument is supported by a steadily mounting body of corroborative research literature, as provided by the conglomerate of Daily Physical Education studies, the argument is exponentially stronger. We have yet to witness the first such daily physical education study conducted in the United States, but it can't be far off.

Empirical evidence by itself, however, is not the answer to all that plagues physical education teacher education. Research has value. It also can have pitfalls. The story told of the new doctoral student in physical education illustrates one of the major pitfalls. In a graduate course on systematic observation, the professor, a former biology teacher, couldn't totally disassociate himself from his biology background. He required his doctoral students to do their first project systematically observing frogs.

One eager new student decided to do his project on the distance a frog could jump. (This student, as you might guess, organized his curriculum around themes rather than low organized games). The student prodded his frog; the frog jumped a distance of four feet. The student recorded in his notebook "frogs with four legs jump four feet." The student then removed one of the frog's legs and prodded the frog to jump. The frog jumped three feet and the student recorded in his laboratory notebook, "frogs with three legs jump three feet."

When the student had removed a second leg of the frog, he prodded it to jump. The frog jumped two feet. The student dutifully recorded in his notebook "frogs with two legs jump two feet." As you might expect, when the frog had only one leg it jumped one foot. The student recorded this in his notebook. Finally, the student removed the frog's last leg and prodded the legless frog to jump. The frog didn't respond. After several prods the frog still didn't jump. The student proudly reported the conclusion of his mini-experiment as follows: "Frogs with no legs are deaf."

Concluding this section on documentation I want to highlight the point made by Joyce and Clift (1984) in their recent provocative article on teacher education reform. In their words, the research community is "the only possible entity that can bring sufficient pressure to bear" (p. 9) on the powers that influence teacher education in the United States. They conclude that "current societal concerns makes this an opportune time for the research community to assert itself in the control of teacher education" (p. 9).

PURSUING UNANIMITY OR DIVERSITY

The second question posed in the introduction about Duck, Duck, Goose contained the phrase *unanimous accord*. The question referred to our unanimity about the game's value for children. Obviously we do not agree about the value of Duck, Duck, Goose, we do not agree about the curriculum for children's physical education, and we do not agree about programs of teacher preparation. We are a diverse group with varying ideas, opinions, and beliefs. Let me provide an obvious example.

If you asked this conference group, "What is the purpose of children's physical education?" some would answer the purpose is improving physical fitness, and others would say the purpose is enhancing children's skill development. For some the purpose is providing classroom teachers with a planning period. Others would say the purpose is enhancing cooperation among children. Some think the purpose is fun and enjoyment, and others think it is sports education. For some physical education is a means for developing the whole child or enhances cognitive understanding. For many, the purpose of physical education for children is a combination of several of these ideas.

The diversity of answers raises an interesting question. Should we pursue unanimity or should we accept variation? My answer is that we should accept variation. We should acknowledge, welcome, and even encourage the diversity among us—for at least three reasons.

First, as we attempt to identify our differences we can't help but identify our similarities. I doubt that we are as dissimilar as it sometimes appears. Second, we could spend a year together and never reach unanimity about either the purposes of physical education for children or the process of physical education teacher preparation. A quick review of the textbooks written on children's physical education will quickly and solidly reinforce this statement.

Third, I think it can be professionally healthy for us to agree to disagree openly and with forthrightness rather than kid ourselves that somehow it's better to agree openly and disagree privately. It's a sign of professional maturity when we can create an environment in which variation is encouraged.

For example, at the next professional preparation conference for children's physical education teacher educators ten years from now, a major part of the program could consist of presentations by several groups. These groups could be carefully selected based on the variations between their purpose statements for children's physical education. Their presentations, of course, would include documentation that their programs were effective (or ineffective) and consistent with their varying purposes as suggested in the Stallings paradigm.

The implication of this example is important. It implies that the teacher education faculty at a university clearly agrees on the purposes of physical education for children. It suggests that, in addition to philosophical unity, the faculty has developed a program that actually prepares effective teachers. When philosophical unity is absent among a teacher education faculty, their graduates are likely to fall prey to the ubiquitous spectre of purposeless teaching that lurks in gyms and on playgrounds, waiting to pounce on young, inexperienced teachers who are uncertain about their mission in the schools.

Philosophical unity within a university teacher education faculty is vital if a program is going to prepare effective teachers. From one university to the next, however, it is unreasonable to expect agreement about the purposes of physical education for children.

As I considered the two directions—to pursue unanimity or to accept variation—I remembered a statement made by Wayne Booth (1970) in an essay entitled "The Uncritical American." He wrote, "to be genuinely critical—to judge on the basis of thought—is to have no easily predictable relationship with belief or doubt, with yes or no, with joining or splitting. The critical mind does not know in advance which side it will come out on, and the surest sign that a person has given up thinking is to find that the 'yeses' and 'nos' flow in predictable and general patterns."

I wonder if some of us who were at the Lake of the Ozarks, and others who could have been, have fallen into the trap (unintentionally of course) of knowing in advance how we will react to a presentation or a speaker. I wonder if our yeses and nos aren't becoming predictable. I wonder if a new direction toward welcoming variation in an atmosphere of collegiality, support, and mutual problem solving, will cause us to heighten our critical thinking. I wonder if an environment that is conducive to planned variation will, in the long run, encourage us to prepare even better teachers than we are now. I know that better teachers will enhance the quality of our children's physical education.

INFLUENCING SCHOOL PROGRAMS

Once we have gathered the data on Duck, Duck, Goose, what do we do with it? It's obvious that we need to do more than present our research at professional meetings if we want to have an impact on the program of our public school colleagues. In fact, this question is as important as the first two. How do we teacher educators affect the functional curriculum (Siedentop, 1980) of public school teacher? I have identified three populations that essentially determine the functional curriculum—the physical education specialist, the principal, and the classroom teacher.

The Physical Education Specialist

Many physical education specialists simply aren't asking the same questions that we are at universities. The questions that I hear them asking most often are:

1. What do I do when I only meet the children twice a week for a total of 60 minutes?
2. How do I provide the type of program you are advocating at the university when I have limited equipment and facilities and, in some instances, 50 to 60 children in a class?
3. How do I continue to keep motivated and working hard year after year when I teach 12 classes a day and have only one-half hour break for lunch?

Not one of us here today is comfortable with these questions. We wish the situations that prompted such questions didn't exist. We deplore the fact that specialists have to teach under these conditions. Our amalgamated frustration and disappointment, however, has not solved the problem. Here's an example. In April 1984, I received a letter from an elementary school physical education teacher, Tom Crawford. I have never met Tom. I don't know where he got my name. I do know that his letter represents questions asked by many specialists teaching, today. His letter is as follows:

Dear Mr. Graham:

I am a male 40 year old elementary physical education teacher—teaching 11 classes per day divided between 2 schools. This is my 18th year of teaching. Obviously the job doesn't get any easier each year.

Would you have any recommendations as to how I might work to lessen my teaching load—not only for myself but for many others in the area also.

Also could you recommend any good current, or not so current, literature on the elem. P.E. field ie: daily, weekly, monthly, seasonal planning books. Thank you.

Tom Crawford
Elem. P.E. Instructor
C. R. Orendorf Elem. School

Ideally, children have instructional physical education daily. Ideally, physical education classes have no more than 30 children. Ideally, there is equipment and adequate indoor and outdoor facilities. Ideally, physical education specialists teach no more than eight classes a day. However, these conditions are rare, and that is the reality of teaching physical education in elementary schools. That is the world of teaching we are preparing our undergraduates to enter and partially explains why Larry Locke told us in 1972 that most universities are preparing teachers to teach better than they actually teach. The situations haven't changed drastically since then—unless perhaps they have worsened.

Sometimes I find myself forgetting about these realities; they aren't very pleasant to think about. I wish they would improve by themselves overnight—a miracle. It won't happen without a concerted effort on our part.

There are scores of specialists like Tom Crawford who are attempting to lower class sizes, increase the number of days each week every child has physical education, and accumulate more and better equipment. They are working on their own, however. They feel they have no support, no help, no one who really cares. For them, these are the basic questions—this is the basic stuff of their careers.

If, as a profession, we made a concerted effort to focus on these issues, similar to the coordinated effort of the Jump Rope for Heart Project, is it possible that we could make substantial gains in improving both the quantity and the quality of physical education for children? At the very least, we could provide moral support to Tom Crawford and others who often feel so alone. Frankly, I am optimistic that we could do more than that. We would have to address it head on—it would be muddy, messy work. There would be no guarantees and little recognition—especially from college promotion and tenure committees. Yet it certainly seems worthwhile if we care about children and teachers of children. One of our major targets would obviously have to be administrators, especially the principal.

The Principal

Next to the specialist, the single individual who can do the most to promote desirable teaching conditions is the school principal. We know this, yet we haven't made a concerted effort to educate principals about contemporary programs of children's physical education.

There is a strong link between teacher satisfaction and principal support. This link was documented recently in a study by Nell Faucette (1984). Her study also provided the insight that in many communities, even today, the administration is a "good 'old boy (or girl) network." When teacher educators fail to understand how this network operates the result is ineffectiveness leading to frustration.

For those who haven't had much success with the good 'ole boy network I can provide a few limited insights. First, know your football. Scouting reports, injury status, and recruiting progress outweigh research findings, innovative projects, and grant possibilities. Second, if the principal is a former physical educator and coach, don't automatically assume that you have an ally. Third, earn the trust and confidence of the principal before you introduce your innovative ideas and suggestions for change. Gaining trust doesn't happen in a single meeting. Simply walking into a principal's office dangling a Ph.D. from a bag of innovative ideas has led to some of the shortest, coldest, and least productive meetings on record.

Fortunately all principals are not in this category. Many want, as we do, the best for children. We are beginning to make progress. Tom Ratliffe (1984), for example, recently developed a videotape package designed to teach principals to observe children's physical education and help their teachers decrease management time and increase activity time.

It has never been enough simply to prepare our students to teach well. We need to become effectively involved in helping students create environments conducive to implementing the programs they have learned at the university, and we need to begin these efforts in the elementary schools that are in the shadow of our university. It's not terribly difficult to locate a supportive principal. We can all find one if we look hard enough. It is difficult, however, to gain support from an unaware or initially hostile administration. But we need to begin. We might as well begin close to home. We also need to share our successes and our failures—so that we can learn from each other. This is a problem we share—regardless of any philosophical differences we might have.

The Classroom Teacher

The principal is important. So is the classroom teacher. But their roles are different. Currently, we are in a professional limbo about the role of the classroom teacher in elementary school physical education. Many of us believe that classroom teachers can teach physical education—and teach it well. The fact is they aren't. We know why but we don't seem to know what to do about it. It seems there are two choices.

One choice is to simply abandon hope, admit defeat, and accept the fact that in the United States classroom teachers are simply not going to teach physical education. A second choice, a bit more optimistic, involves exploring alternatives for classroom teachers. Perhaps we are expecting too much if we ask a classroom teacher to implement a program that is similar to the one we would expect a physical education specialist to implement. There may be realistic alternatives, however.

For example, daily ten-minute lessons taught by a classroom teacher must certainly be better than no physical education at all. Fifteen-minute fitness workouts, supervised by classroom teachers, are part of the South Australia Daily Physical Education Program (South Australia Education Department, 1981). In parts of British Columbia, classroom teachers are required to teach physical education daily. The physical education specialist acts as a resource, master teacher, and coordinator for the program in a school but doesn't actually teach physical education.

Before we totally abandon classroom teachers, I hope that a few brave physical education teacher educators will explore alternatives that have potential for involving classroom teachers in teaching physical education.

CONCLUDING COMMENTS

The title I was provided for this talk was Commitment to Action. As I reflected on this title, it become clear that the question was not one of commitment. This group is as committed and dedicated a group as there is in education today. More or greater commitment is not needed. What are needed are the right types of commitment. Reflecting on the future, Marshall McLuhan talked about the hazard of looking to the future through rear view mirrors. When we look to the future through a rear view mirror, the future has a way of looking remarkably similar to the past. In identifying commitment in this paper I have tried to look to the future through a looking glass, rose-tinted perhaps, but not a mirror. I saw five major commitments we might make.

The first commitment is to begin program documentation. Techniques and procedures have been developed that permit teacher educators to document the performance of their undergraduate and graduate students as the students are teaching. The daily physical education thrust also has provided a framework for realistic program evaluation in the motor, cognitive, and affective domains. As teaching and program documentation become more available, the tendency to adopt curricula through "cultural transmission" and testimonials of enthusiasm will be reduced. We need to make a commitment to document our program outcomes.

Planned variation is a second commitment. It is time that we realize we simply are not going to agree on a single approach (content and method) to teaching children's physical education. It's time that we accept that fact, identify our programs through a statement of theory and philosophy, and document the effectiveness of the program based on accomplishing the stated objectives. Once this documentation becomes available, teacher educators with different program emphases can begin to dialogue on a factual rather than emotional basis. We can also commiserate about the difficulties and travails of doing field-based research. We need to make a commitment to accept that there is not and will not ever be, a single program of physical education that we all support unanimously.

Many principals still believe that physical education can be taught effectively to sixty children with one ball and a patch of grass. We know this is a myth. We teacher educators could argue that educating principals isn't our responsibility, but it is. It's not enough to prepare good teachers. We need to make a commitment to help create the environments that allow teachers to implement the program they were prepared to implement.

Viewing public school teachers as partners in the process of teacher education is a fourth commitment we need to consider. Our tendency is to talk disapprovingly of public school teachers' work without accepting them as colleagues who may want to teach better but may be unable to in their situations—situations too often dominated by large classes; minimal equipment; twelve classes a day; and, in many parts of the country, inadequate facilities for accommodating inclement weather. We need to commit to accepting the public school teachers as colleagues.

In the majority of elementary schools, physical education is the responsibility of the classroom teacher. Few of us express satisfaction at either the quantity or quality of physical education taught by classroom teachers. As so many of us have learned, eloquent exhortation about the importance of physical activity in the total education of a child rarely lasts beyond the first few days of teaching, when recess is the only time the classroom teacher has a break. We need to make a commitment to assist classroom teachers to provide quality programs of physical education that are compatible with their myriad other duties.

In an earlier draft of this paper, I wrote that our national association ought to take the leadership in guiding these commitments but after rereading Naisbitt's *Megatrends* I am no longer looking to our national association as a catalyst for change. The commitments necessarily will begin small and, as they succeed, they will grow and spread. The changes will begin with individuals and partners who identify areas of interest and commit to pursuing them through research, teaching, and service.

Finally, it is time we begin to work together. The scrimmage is over; it's time to begin the season. I keep hearing that school districts are eliminating physical education specialists in elementary schools. This situation should pull us together. If it doesn't, what will? Of course we don't agree on everything, but we do agree that our children need physical education—physical education that is taught frequently and taught well.

Assembled at this conference are the most knowledgeable individuals in the United States, if not the world, on children's physical education and the preparation of physical education teachers. Yet many of us are frustrated by our lack of impact on the way physical education is viewed and taught in our schools. We can, and no doubt should, have substantial influence on what children are learning in physical education.

Most of us would agree, however, that we haven't had such an impact. Few of us came to Orlando to celebrate our marvelous breakthroughs in teacher preparation. A number of years ago, on a different topic, Larry Locke proclaimed, the "pax Orlandum". The topic is different but the thought isn't. We need to come together to talk with one another, to listen to each other's ideas, and to disagree openly and from an empirical base; we need to begin to reach out to one another.

Some might think this is unrealistic. I expected that. For any skeptics who think that these commitments may be impossible, I offer the following two thoughts. The first is by Goethe: "Whatever you do, or dream you can do, begin it. Boldness has genius, power and magic in it." The second is by Werner van Brauhn: "Nowadays to say something is impossible always puts you on the losing side."

If we don't believe and begin, Tommy will play Duck, Duck, Goose in the second and third grades as well as the first. And Tommy's children will play Duck, Duck, Goose. The game has a way of enduring. But we can change that—if we make the right commitment to action.

"Many of us are more capable than some of us . . . but none of us are as capable as all of us!"—Anonymous.

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From The Ozarks to Orlando: Now That We Understand The Question, What's The Answer?

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This is the closing session, and the program indicates that now we are supposed to have a "conference summary." I say "supposed to" advisedly, because although such a closing act was possible when we met at the Lake of the Ozarks a dozen years ago, it is no longer. Happily, however, it is all your fault!

In 1972, it was possible to summarize what had been said about preparing elementary specialists in physical education because had it not been for one major address by Lorena Porter, there wouldn't have been anything to summarize. The small special-interest sessions dealing with teacher preparation had been poorly attended and, as concurrent program items, they had not been available to all the conferees. Consequently, almost all of the talk in the main arenas of the conference had not been about teacher education, but about school curriculum and how to teach children.

Because Dr. Porter was her usual self—terse, explicit, clear, and completely organized—I was able to summarize her singular contribution in a few sentences. Then, to borrow the useful words of Marion Sanborn, I was free to "mess about" for thirty minutes and quit early. Because it was late and everyone was ready to leave, my closing address was regarded as a considerable success. Few were inclined to notice that much of the content in that summary had only the most tenuous connection with events over the previous three days.

The fact that 30 minutes of messing about with teacher education could be regarded in 1972 as cogent synthesis, tells where we were then. The fact that neither I nor any of you could get away with that in 1984 tells where we are now. Above everything else, this closing session should celebrate that wonderful fact.

As for the business of conference summarizing (a pretentious idea anyway), you have talked so much, in such detail, over such a range of topics and stuck to the topic with such persistence, that volume and diversity alone make summary a task for weeks of reviewing notes and papers. At the least, it is a job for a team rather than an individual. Perhaps the conference Planning Committee, which was the root cause for this embarrassment of riches, should be stuck with the job.

For Orlando, the Planning Committee knew not only the difference between school curriculum and teacher education, but also the relevance of one for the other. They certainly knew the difference between program content and program process in teacher education. They selected speakers who unerringly knew the difference between inservice and preservice clients and who clearly understood the difference between the subject matter of movement and the scientific art of pedagogy as two distinct forms of program content. We even had speakers who could explain the subtle difference between intended and unintended curriculum in teacher education. Happiest of all, however, everyone seemed to appreciate the critical distinction between rhetoric about programs and the hard realities of teaching teachers.

In response to this single-minded focus by Planning Committee and speakers, fully three-fourths of the questions and comments from the floor dealt with *teacher education*. Nearly everyone seemed willing to set aside the topics of what best to teach and how best to teach as questions which could *inform* but not *constitute* a conference on preparing the elementary specialist. In doing so, we, the conferees, have created the *first* National Conference on Preparing the Physical Education Specialist for Children. I ask you to join me now in a moment of loud tribute to all of us!

Out of fairness to the organizers of the 1972 conference, what happened then may have been necessary, perhaps unavoidable. We had to go there and fail in order to understand what success would have to be. In that sense, all of us owe a debt of gratitude to AAHPER, the individual members of The Elementary School Commission, and to the Task Force on Children's Dance. They were the pioneers who knew we had to begin, even if there was no clear map to guide the journey.

If we learned only what teacher education is not, Lake of the Ozarks may be one reason why the preparation of elementary specialists now has a clear head start and a growing lead over the enterprises of preparing either K-12 generalists or secondary level specialists. Elementary is where curricular reform and technological sophistication have found the widest application. Preparing elementary specialists is where the action is in physical education, where the optimism is, and, increasingly, where the hope remains.

To appreciate what you have accomplished, it is important to understand that good intentions and hard work do not a successful conference make. Only a year after Lake of the Ozarks, AAHPER planned a professinal preparation conference in New Orleans which attempted to utilize an "all level/all subject" approach to the topic. To say that the results were undistinguished would be kind. The enormous frustration consequent to the painful confusion of New Orleans was a central factor in our inability to recruit any serious interest in teacher education at the national level of AAHPERD for nearly a decade.

Conferences do not always work; sometimes they move us back rather than ahead. Most often conferences move us back when the people who plan them are unsophisticated about the topic area or are under serious political constraints created by other people who don't understand the territory. In other cases, the planners may have a fair grasp of what the proper questions are, but fail to discipline speakers and conferees to address a single agenda. Witness the 1980 Chicago conference on professional preparation which had a format at least as creative as we have in Orlando, but which ended up diluted and unfocused because nobody had succeeded in defining what was to be talked about when professional preparation was the topic.

We did not often have that problem at this conference. Planning Committee and conferees knew what to talk about. The only significant difficulty arose around the complex problem of how content in school curriculum relates to content in teacher education. No one should be surprised or overly concerned that we stumbled a bit over that tangled knot of relationships. That confusion can be sorted out in the continuing dialogue which inevitably will follow this conference. Given our overall performance, we earned an "A" for staying on task.

While passing out bouquets please pause to note Judy Rink's concise and generally accurate summaries of each major paper. I am aware, as is she, that there is divided opinion about whether such periodic summing up is a useful or even appropriate strategy for a conference. What has not been heard is any suggestion that she failed to do it skillfully and with singular grace. I, for one, appreciate her careful efforts and used them freely in performing my own task.

Once in the congratulation mode, perhaps we should go all the way and have an orgy of appreciation for all the good things that have happened in the last decade for people who care about physical education for children. Much of it *is* related to professional preparation and thereby to the people in this room. Think for a moment and be happy about the following:

1. We now have specialized training routes at more institutions than ever before in history. A recruit to teaching children does not have to take preparation in a program based on K–12 certification, does not have to be taught by a faculty with only one elementary specialist in residence, and does not have to elect to study where a single elementary methods course is the sole instrument on which to base a career. There are substantial, well-designed undergraduate programs for anyone who is willing to seek them out.

2. Research on teaching has begun to influence the content of professional preparation programs for elementary physical education specialists. In some programs, undergraduates in a movement skills course are as likely to be coached in techniques of efficient class management, strategies to increase time on task, and the mysteries of "withitness" and overlapping as their peers who will teach reading in the classroom.

3. Some undergraduate programs now do a good job of sensitizing graduates to issues of race, sex, and motor equity. Although the general level of preparation in this area for all graduates is far from satisfactory, we now have good models, some field tested materials, and a slowly growing base of relevant knowledge. If commitment to this vital task can be diffused through all programs, we will have taken another giant step for all children.

4. We now have attractive, nationally disseminated elementary curriculum models that are not explicitly sport or sport-skill based. Rooted in generic skills for playful and expressive movement, these resource products have exerted a positive influence on school programs in many communities.

5. There is more pedagogical diversity seen in elementary physical education. Variations on task or task/practice styles now are as common as the simple command format. If you are inclined to wish for even more variety—then go and make it so!

6. Methods and materials designed to help elementary teachers accommodate children with special needs in the motor play environment have become sophisticated, highly utilitarian, and widely available.

7. We have produced elementary curriculum and methods textbooks that are better, by far, than anything else in physical education, and easily are a cut above most comparable texts for classroom teachers.

8. The domain of motor development literature for children is thicker and more useful than ever before—partly because professional programs demand such information. Publishers, journal editors, and scholars do respond to clear opportunities for producing and disseminating knowledge that informs and shapes professional practice.

9. Use of systematic observation instruments for teacher feedback and other purposes is as close to commonplace in elementary physical education classes as in any other area of education—including secondary school, college, or even athletics.

10. Many of the best and brightest graduate students in curriculum and instruction, staff development, and pedagogical research took their initial training in elementary specialist programs. The quality of their dissertations and subsequent scholarship is something of which we can be proud, as is the fact that they so quickly are becoming agents for change in both school programs and teacher education.

That is a long and encouraging list, but perhaps we have had enough of self-congratulations. For me, the conference will not feel complete unless I have at least one opportunity to play the role of resident "old curmudgeon." Donning that hat gives me license to enter public complaint for both myself and all of you who have taken the opportunity to pass on private concerns. As you might expect, several defects in the program have left some feeling unfulfilled—and me outright grumpy.

Have you noticed that in the three-day conference on preservice and inservice teacher education—a meeting involving some of the most thoughtful professionals, active scholars, and creative practitioners in the business—we did not have a single speaker, session, or activity through which any of us could learn about, review, or discuss what *research on teacher education* has to say concerning how good teacher education programs should be designed, operated, and evaluated?

I thought that learning more about how to use knowledge to do our work better was supposed to be one of the main reasons for coming to Orlando! It was almost as though we didn't want to be bothered with the facts. We were comfortable with generalizations and satisfied by exhortation, but distinctly uneasy with the nuts and bolts.

Did you notice that we did not have a single speaker, session, or activity through which any of us could learn more about how research-based knowledge can be used to improve the art of helping teachers? In fact, the topic was not even mentioned in any of the main conference sessions. It was as though there was nothing to know about the technology of *research utilization in teacher education*—no literature, no dissemination projects, no research and development centers, no model programs, and nothing to learn about how research can be put to work in teacher education.

Finally—and most amazing given our obvious interest in the content of training programs—we did not have a main speaker, session, or activity through which all of us could learn what *research on teaching* says (and does not say) concerning the content of preparation for effective instruction at the elementary level?

I noticed those three curious omissions: research on teaching, research on teacher education, and development designs for utilizing research in teacher education programs. That it bothered me was to be expected—disapproving is a curmudgeon's primary function—but the real question is whether or not *you* should be bothered. Did you lose out on anything really valuable? Were all of us cheated by those three omissions? Let me present the case for the prosecution.

In his dissection of the liberal arts versus professional training issue, Daryl Siedentop made a passionate appeal for the need to help teachers learn critical skills required to do their work. In both his address and the question period which followed, it was clear that Daryl had identified a set of basic pedagogical skills by recourse to the research on effective teaching. Were you not curious about what those skills might be, how well they were supported by the literature, and how they could be made part of a preservice or inservice training program? The speaker did not give you the answer to those questions; that was not his job. At this conference, *nobody* was assigned the task of talking about research on teaching as a source of program content, or the tricky business of research utilization in program design.

Yesterday, Patt Dodds talked about research on field experiences by using three examples from the research literature. Audience reaction to her address indicated that she succeeded in raising questions that might change how some of us think about that program component. Did any of you wonder what she might have said about lectures, discussions, textbooks, films, simulation devices, demonstrations, observation, practice, feedback, microteaching, peer teaching, coaching, transfer, retention, or any other program-related topic on which there is substantial research literature? She did not address any of those vital topics because it was not her job to do so. At this conference, *nobody* was assigned the task of talking about research on teacher education.

For the sake of accuracy, it is true that in the concurrent, special interest sessions there was a lively presentation and discussion involving ALT-PE, one each of short sessions on data-based survey and program evaluation research, and presentation of several program models which have strong links to the knowledge base. The difficulty is not with the quality or relevance of those small evening meetings. The problem is that there was no provision in the large, prime-time sessions for a moment when all conferees could gather and be brought up to date on research on teaching, research on teacher education, and the literature on research application procedures in teacher education. I believe that constitutes a serious omission in the program.

If you agree, all we can do now is be sure the next program planning committee does not make the same mistake. To ensure that protection, we need a diagnosis of what went wrong this time. Which of the following causes seems most likely to you? Did the planning committee consider space in the program for research, but decide (1) there wasn't enough of the stuff to bother, (2) they didn't trust it to tell the truth, (3) it really wasn't relevant to preparing elementary specialists in physical education, (4) it was all too contradictory to be of any practical use, (5) it would be too boring to have to sit and hear about it, (6) the conferees would never understand it, (7) everybody already knows what it has to say, (8) all of the relevant research involves ALT-PE and that stuff belongs in an evening special interest session, or (9) each speaker will use research-based knowledge as appropriate and thereby no separate program component need be planned. As an alternative, can you imagine that the members of the committee never thought about research at all?

My own diagnosis is the ubiquitous "all of the above." Put in the same position, most of us would have shared at least some of the same concerns which apparently influenced the planning committee. Nevertheless, whatever sympathy we may have for those who wrestled with the burdens of program planning, there is no valid excuse for not making research-based knowledge a central part of any conference which purports to deal with teaching and teachers.

Some of the items on our diagnostic list of reasons for ignoring research simply are false and others represent real problems that demand response in the form of creative program planning. There is relevant research, and not all of it is contradictory. Trust is a problem, and not only for those outside academe; but it is a problem that can be addressed. Boring speakers will give boring talks on any topic—not just on research. Finally, there are few people here who already know all that research would suggest about preparing teachers, and, with skill and sensitive assistance, every person here could be helped to understand better the research that is available. At least it seems reasonable to think that such an important conference topic can be better provided for than leaving it to accidents of judgment by individual speakers who have other primary assignments.

Please understand that my appeal for specific attention to research at the next conference does not presume that research will tell us what to do. Educational research will not tell us how to prepare elementary specialists; that is not its purpose. The expectation that it can perform such magic is one of the most mischievous, dysfunctional, and even dangerous notions ever let loose among us. Research only helps you get smarter about the territory in which you have to make decisions.

Deciding on a course of action and carrying it out is a different process entirely from understanding how things work. To design a teacher education program that can make use of research requires a mixture of considerations:

1. moral norms based on personal values about what is right,
2. craft norms based on accumulated practical wisdom about what works,
3. aesthetic norms based on our judgment about which actions appeal most to our sense of order and style,
4. practical limitations and political constraints within the local situation, and
5. technical norms based on scientific evidence and understanding about how things work.

Being smart about the territory certainly can help, but by itself it does not produce correct action.

There is no science of teacher education and there will be none. Preparing teachers is a practical art, although there is a scientific basis for practicing that art. If we fail to make effective use of that resource, our programs, our students, and their pupils will be the poorer.

If you are persuaded on this point, at the appropriate time we can remind the program planning committee for the next conference. We can write to Margie Hanson to confirm our support for both another conference and more complete program coverage. We can even volunteer to serve when the long and thankless tasks of conference organization must be performed. Ultimately, we all will have the power of a vote in our registration money. That, however, is the least desirable recourse and one which should not be needed if the lessons of Orlando are remembered.

Enough complaining. On balance, it was a fine conference and we all go home better for having participated. It may help achieve a proper sense of closure if you will engage in one final task. I will provide a short list of important topics raised over the past three days. There is no guarantee that your list would be exactly the same or that this list will represent any sort of valid consensus. It should provide a reasonable tool, however, for building a finish to this conference.

As I go through the list, your task is to note a response to each item. You can choose one of three ways to respond—grade, plan, or prioritize. If you want to grade, you can give this conference a report card by assigning an "A" if the topic received serious and (for you) useful attention, a "C" if it was at least clearly named and noted, and an "F" if the topic was ignored. If you want to plan the program for the next conference you can award an "X" for any item that should be given major attention with speakers, discussion, and perhaps an action workshop; a "Y" for items worthy of a special interest session; and a "Z" for things better left to another forum. Finally, if you only want to prioritize, simply think in terms of what topics seem most and least important for making progress before we gather again. Give "1" to areas for which you feel the greatest urgency, and award "12" at the other end of the scale.

I will provide one or several key words for each topic you can jot down for your own working record, and then I'll provide a couple of sentences to clarify the nature of the topic. Most of the topics on the list really contain nests of related problems, issues, and questions. I will call them *chunks* to suggest the cautions appropriate whenever we pull something out of the whole forming its natural context. The categories, which are untidy and temporary, are merely for our convenience—not a taxonomy of topics in teacher education. Note in particular that the first four chunks are entangled such that any discussion of one often is a discussion of the other three.

Chunk I: The Schools

The relationships of teacher education, preservice, or inservice, to teachers, programs, principals, children, parents, and school systems must be changed. If preservice graduates take jobs in schools that are inhospitable to good teaching, what is the point of improving teacher education? The notion that we can make those schools more hospitable by building some imagined strength into individual teachers is silly. Schools consume good, young graduates for lunch, and snack on experienced teachers between courses. Long-term, systematic improvements come only from many people working together. We know too much now to ignore the problem any longer. Teacher educators must become substantially involved with all the people who work in schools to create environments that encourage teachers to do their jobs well.

How best to become involved is a complex social, political, and logistical question which demands our attention.

Chunk II: Preservice Program Design

Teachers can't transfer skills to the workplace that they have not acquired. Weak programs do not make reliable modifications in what their undergraduate clients know, believe, or can do when they actually have to teach. Lecture, discussion, a textbook reading, and perhaps a bit of peer teaching practice simply do not make any reliable difference in what graduates are likely to do in the gym two years later. At heart, this is a problem of training technology (program process) that helps novices acquire new skills and transfer supports that help them sustain what they have learned until they practice it in the field and move it into their permanent instructional repertoire. The training technology already exists and is not prohibitively costly to put in place. Descriptions of successful models for field support during preservice practica and the induction year now abound in the literature. What are left are the staff and organizational development problems of redesigning preservice teacher education programs to include methods that actually change what teachers do with children.

Chunk III: Inservice Program Design

Whether the motive is building more hospitable environments for graduates, providing training sites congruent with program needs and values, or simply fulfilling the charge of providing outreach services for public schools, teacher education faculties are going to become increasingly involved in inservice teacher development. To do that well, to make a real difference for clients, and in order not to end up with frustration, waste, and with egg on their faces, both new skills and considerable sophistication are required. Experienced teachers are not undergraduates, schools are not college departments, and change is a different and chancy game out in the field. We need to listen, learn fast, and support each other in every possible way.

Chunk IV: Induction

Teacher education should be a life-long process. Virtually everyone who has studied the continuum of development from presocialization of recruits to retirement of veterans, has concluded that the key juncture is neither preservice nor inservice training—it is the first two years of employment, the induction years. If physical educators do not come to grips with that fact, learn about how induction shapes teacher behavior, plan how to best prepare graduates for the rigors and dangers of induction, and decide how to share a part in the action, then they will remain on the outside—mostly just looking in.

Chunk V: Preservice Program Content

We now know something about what makes effective teaching in physical education. We also can make fruitful guesses where the evidence is yet incomplete and, with cautious transformation of research on other kinds of teaching, we can find more clues to specific behaviors that make up good teaching. This pedagogical content must become the minimum expectation for *demonstrated* mastery by every graduate. The scope is large enough for programs to have their own stylistic emphases, but whether the element is skills for monitoring dispersed students, powerful forms of feedback, or strategies for maintaining equal access to learning for all students, there should be a common core of minimum expectations for professional skill. These should be acquired before a student is considered able to take full, unsupervised responsibility for a class of children. We need to define that minimum core and begin work on procedures for helping teacher educators incorporate it into their programs.

Chunk VI: Recruitment, Selection, And Retention

More than half of the variance in teaching behavior seen in any class of graduates will have been determined by the characteristics the class brought as entering freshmen. Less than half of their capacity for professional performance will be a direct result of the training program. If that axiom is true—and there are good reasons to believe that it is—then who comes and who stays to graduate matters a great deal in producing good teachers. This is not a matter of selecting for intellectual factors or high academic performance—a popular political matter which has little demonstrable relevance to subsequent teaching effectiveness. There are factors that can be detected in trainees that do have verifiable consequences in areas such as program completion, career commitment, vocational persistence, and job satisfaction. Attracting students with good prospects, counseling students out who have poor prospects, and retaining students with the best prospects are old but nevertheless vital tasks to which we have to give much more attention.

Chunk VII: The Disciplines

Most programs have achieved at least an uneasy truce between the residents of the academic disciplines in physical education and those who conduct professional preparation. Unfortunately, the end of internecine war has not brought with it much creative resolution of the central problem—how to help students make effective use of disciplinary-based knowledge in the work of professional practice. We have learned what does not work. Exhorting students (and teachers) to discover appropriate applications on their own does not work. Asking teacher educators to translate abstract knowledge into application resources does not work. Demanding that scholars in the disciplines teach in ways which reveal rich arrays of application strategies has proven ineffective (and probably was unreasonable anyway). What we need is some new thinking, some experimenting with better alternatives, and some sharing of successful models.

Chunk VIII: The Purpose of Elementary Physical Education

If teaching is a means, toward what ends is it aimed? As George Graham has indicated, our profession seems resigned (with varying degrees of comfort) to the necessity of agreeing to disagree on the question of purposes. Individual teachers, professional organizations, government agencies, communities, and even schools or training programs will continue to have different visions of the objectives for elementary physical education. As long as a purpose is clear enough for full public scrutiny and as long as it can be linked to effective means, there is no direct harm in marching to a different drummer. One exception to this rule is the preparation program in which consistency is a matter of enormous consequence. Show me a program where novices are constantly "jerked about" regarding what they should try to accomplish when teaching and I will show you a program that produces poor results. We need to work out program and staff development procedures that permit a faculty to identify a safe, minimum level of consensus on the objectives of elementary physical education. Models of both process and product might help many of us to resolve this familiar but still mischievous problem.

Chunk IX: Teacher Educators And Their Environment

Recruiting, training, rewarding, and developing teacher educators are processes we usually talk about (or gripe about) privately. It remains a fact, however, that if we ever want to do what we really could do about preparing elementary specialists, we will have to upgrade ourselves as a professional group and alter the environment that shapes and limits our behavior. When 50 percent (a conservative estimate) of all teacher educators have never taught a lesson in a public school, we have a problem. When full-time engagement in inservice education provides few institutional rewards and presents severe risks for tenure and advancement, we have a problem. If we don't make plans to improve our own work environment there will be little hope of attracting and retaining the cadre of talented people that teacher education demands.

Chunk X: Program Evaluation

We must return to George Graham's clarion call for program validation and make clear distinction among three kinds of evaluation.

1. If we study children and discover that when Duck, Duck, Goose is included in their physical education curriculum they become more fit, or cooperative, or agile, or whatever, then we have validated a content element in the program—and learned something about what should be included in the content of teacher training.
2. If we study the teaching of Duck, Duck, Goose and discover that children learn it quicker and more thoroughly when we use guided discovery rather than command-based progressive part, we have validated a pedagogical strategy and, again, learned something about appropriate content for teacher training.
3. If we discover that undergraduate teacher trainees can learn how to be effective in teaching Duck, Duck, Goose more efficiently and reliably when the program includes simulation practice and discrimination training, we have validated a process element in the teacher education program.

Everyone accepts that we need some of all three forms of program evaluation, but it must also be understood that the primary focus for a conference on professional preparation should be on number 3, evaluating teacher training.

Chunk XI: Participating In Public Policy

Preparing elementary specialists does not take place in a vacuum. We all are part of larger teacher training units, some of which are being buffeted by a storm of public criticism and punitive action by state legislatures. In other states, schools and departments are in the eye of a hurricane where the really radical response is "this too shall pass." Perhaps the greatest danger is that we will somehow survive the present crisis without having to make substantial changes to improve our position within higher education and the network of certification and accreditation regulations which surround our programs. The historic pattern of escalating attacks on teacher education suggests that the next return of this cyclic storm may bring the end of collegiate preparation for teachers. The people in Reston have been right about this all along. Every faculty that engages in preparing and developing teachers must learn how to exert sophisticated political influence and how to engage in aggressive preplanning about public policy rather than responding after others have taken action. Learning how to live creatively with the inevitable, and learning how to influence what appears to be possible in the realm of public policy, is a competence few of us thought would be required when we entered our careers. For better or worse, the game has changed and in many states we either will learn to play at politics or live with the unhappy consequences of being only spectators.

Chunk XII: The Research Agenda

We have limited resources for research on preparing elementary specialists. A sense of the priorities among possible questions is absolutely necessary. We need to know where data and understanding will have the largest payoff. Professional organizations, each training program, and each teacher educator needs a "to do" list that will remind them of where the big questions are located—particularly when temptations to dabble with time and resources are present. I've suggested my own agenda—you will need yours. Perhaps together we should prepare a master list for the elementary specialist area of the profession.

How do we learn about and systematically alter the subjective warrants (ideas about teaching) which, Hal Lawson has told us, all entering students bring to the training process?

What is going on inside the training program as a social unit? Who is teaching what to whom and when and how? Linda Bain, Tom Templin, and Neal Earls all have suggested that we would do well to find out.

How can we improve the transfer and persistence record for the skills we teach our clients in preservice and inservice programs?

How do we go about improving the accuracy of movement perception and analysis by our students—in a reliable and cost-effective manner?

What do good elementary specialists really know about teaching and where, when, and how do they learn those things?

There are a dozen *chunks*. You may want to add some of your own, or merge, delete, and revise some of mine. Whatever the final form of the list, we have a substantial agenda. We did well to cover so much of it this time. Next time we will do even better. Certainly we must gather again, hopefully with a shorter interval than the 12 years between the Ozarks and Orlando. Where can we find a city that begins with *O* to keep the string alive?

EVENING SESSIONS

Employment Prospects for Elementary Physical Educators: An Assessment of Market Indicators

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The marketability of physical education specialists within the public schools is one of the most important issues currently faced by teacher educators in our field. A substantial, nationwide surplus of physical education teachers has haunted our profession for more than a decade, and there is no indication that the situation is improving (Akin, 1984, p. 3). An established trend toward physical education class instruction by classroom teachers has made this issue particularly salient at the elementary school level. Since we are in the business of preparing young professionals in an area of specialization for which the employment prospects are uncertain at best, it is encumbent upon us to provide these students with a description of the job market that is accurate and informed.

In attempting to describe the job market, I have collected an abundance of data from national, state, and local sources to answer the following questions: 1.) What is the status of employment in public school physical education? 2.) What are the critical factors that will affect the marketability of specialists now and in the future? and 3.) What are the sources of support that we can employ in ensuring the survival of existing programs?

To determine the status of employment in public school physical education, a nationwide survey was conducted. A current assessment of employment figures was obtained through telephone calls to state physical education consultants or other education officials in 50 states and the District of Columbia. These data were collected in the fall of 1983 and represented the most recent available data for each of the states reporting.

Only those specialists whose major teaching responsibilities were coded as physical education or adaptive physical education were included in this investigation. In addition to determining the number of specialists employed within each state, a breakdown was established of those employed at elementary (K-6) and secondary (7-12) levels as well as the respective student enrollments for these levels. These figures were used in determining the following: 1.) the total number of physical education specialists employed in grades K-12, 2.) the proportion of elementary and secondary physical education specialists in the total employed, 3.) the ratio of elementary school students to elementary physical education specialists, and 4.) the ratio of secondary school students to secondary physical education specialists.

Forty-three states were able to provide data for the total number of physical educators employed in grades K-12. Of this number, 37 states identified the number of specialists employed at elementary and secondary levels. Analyzing the data was somewhat complicated by variations in the format in which they were reported. Fourteen states reported the number of specialists in terms of full-time equivalents (FTEs), with one full-time position being equal to five periods per day for five days a week. This statistic provided the most useful data for determining student/specialist ratios. However, the remaining 29 states reported this information in terms of a simple head count, a statistic which does not distinguish between full-time and part-time teachers (or those with multiple-subject assignments). Although these differences limited the strict interpretation of the data for state-to-state comparisons, it was possible to identify some very significant trends and differences.

In the 43 states for which the K-12 counts were available, a total of 109,666.43 physical education specialists were employed. An analysis of the data reported in FTEs by 14 states produced an accurate measure of student/specialist ratios. Of the 14, four reported combined figures for elementary and secondary levels. The average ratio for the 14 states in combined grades K-12 was 402.49/1 (402.49 students for every specialist). The highest ratio obtained for grades K-12 was 946.43/1 in Hawaii, and the lowest was 266.75/1 in Wisconsin. At the elementary level, the average student/specialist ratio was 1105.40/1, or more than five times that of secondary grades—218.89/1. Elementary ratios ranged from a high of 2992.29/1 in Arkansas to a low of 422.37/1 in Illinois. Secondary ratios ranged from a high of 353.41/1 in Nebraska to a low of 145.76/1 in Texas.[1]

The most significant, but least astounding finding of this investigation was the relative disproportion of elementary to secondary specialists. In the 37 states for which this breakdown was given, a total of 90,123.73 specialists were employed. Of this number, only 27,624.21 (or approximately 31 percent) were at the elementary level. By contrast, the concurrent student enrollments for elementary grades comprised an average of 59 percent of the total student population. At the secondary level, the number of specialists employed was 58,289.92 (or approximately 65 percent), while student enrollments for these grades comprised only 41 percent of the total. The remaining four percent (a total of 4209.60) were employed in combined K-12 or middle school positions.

It is obvious that the existing priorities for physical education are illogically reversed throughout the United States, and far greater emphasis is placed at the secondary level. Attempting to develop optimal fitness and lifetime sport skills in high schools when physical education in the lower grades is virtually nonexistent is a futile and unproductive approach. Hundreds of thousands of our nation's elementary school students are being paid a great injustice by the failure of schools to meet their physical needs.

Determining the current status of employment was only the first step in assessing the marketability of elementary physical education specialists. The next important step was to take a look at the critical factors that are likely to affect this marketability in the near future, including teacher supply and demand characteristics, demographics, population dynamics, legislation, and social and educational trends.

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[1] An employment data breakdown for elementary and secondary levels for each state may be obtained from the investigator.

A study of student enrollment trends in United States public schools provided some important clues for the projection of teacher supply and demand. Although the decade between 1971 and 1981 demonstrated a significant decrease in student enrollments and a large increase in elementary school closings, this trend has begun to reverse. During the 1970s, public school student enrollments decreased by 15 percent at the elementary level and 7 percent at the secondary level, and the number of public elementary schools decreased by four percent (Plisko, 1983, p. 5).

Job prospects for teachers generally are expected to improve significantly in the next five years. This trend is the result of a baby "boomlet," which occured in the late 1970s, and a substantial decrease in the number of newly qualified teacher graduates. Although the job market has apparently bottomed-out and the demand for teachers generally will increase throughout the remainder of the decade (Feistritzer, 1983; Plisko, 1983; Akin, 1984), this projection does not hold true for physical education teachers. The *1984 Teacher Supply/Demand Report* (Akin, p. 2) published by the Association for School, College, and University Staffing indicated that physical education is the only teaching field with a considerable, nationwide surplus in 1984. Those fields with a considerable shortage in 1984 included mathematics, science-physics, computer programming, and science-chemistry (Akin, 1984, p. 2).

Between 1954 and 1974, a steady growth in numbers of those completing physical education certification requirements was evidenced. During this period, newly qualified specialists increased from 7,274 (NEA, 1959, p. 12) to 27,733 (Grant and Snyder, 1976, p. 110). A gradual trend toward decreasing numbers began in 1975 (Grant and Snyder, 1978, p. 110) and has continued through the present. The most recent available estimate provided by the National Center for Education Statistics established the figure at 19,095 in 1981 (Grant and Snyder, 1984, p. 114). In 1958, 73 percent of persons who completed requirements for standard teaching certificates in physical education were employed in their field of preparation (NEA, 1959, p. 26). By 1981, these numbers had dropped to only 36 percent full-time and 13 percent part-time (Plisko, 1983, p. 190).

Teacher supply and demand, demographic trends, and population dynamics are three of the critical factors that must be monitored in projecting the job market for physical educators. Legislative actions and the back-to-basics movement are recent trends which should receive additional attention. Both of these factors have had a large impact upon physical education within the past two years, and it is likely that this influence will continue in the coming years.

Legislative actions having an effect upon physical education programs will take two possible forms. Those on the negative side may seek to reduce or eliminate requirements for physical education, therefore posing a serious threat to the survival of programs. Those on the positive side may serve to strengthen programs, thereby enhancing the marketability of specialists within our field.

The American Alliance has recently taken an active role in responding to legislative efforts to reduce or eliminate physical education requirements in several states. Among the states which have recently combatted such efforts are Massachusetts, Illinois, Pennsylvania, Virginia, and California. Proposed legislative actions in these states would have effectively eliminated thousands of positions, but were soundly defeated through strong lobbying efforts and active media coverage.

The State of Florida has recently enacted a legislative change that should significantly improve the employment prospects of physical education specialists with elementary emphasis. On October 3, 1984, the State Board of Education approved new physical education certification requirements designed to provide for more specialized preparation at elementary and secondary levels. These new requirements call for separate certification levels for grades K-8 and 6-12, and are expected to have a "tremendous impact on physical education teacher preparation programs in the state, school district in-service education, and out-of-state physical educators applying to teach in Florida" (Harageones, 1984, p. 1).

The back-to-basics movement and all of the related educational reforms that have arisen over the past two years constitute a significant social and educational trend that will significantly affect the future of physical education programs at all levels. State and local efforts to upgrade graduation requirements and beef up academic standards have taken on national proportions as a result of the 1983 report of the National Commission on Excellence in Education entitled *A Nation at Risk: The Imperative for Educational Reform*. This new commitment to excellence in education is welcome and long overdue, and the "rising tide of mediocrity" in our educational system that this report documents is blatant and undeniable. However, we will need to be extremely vigilant in the coming years to make sure that this beefing up of academics does not take place at the expense of physical education.

We must demonstrate that physical education is not a frivolous adjunct to basic education, but that it is an integral and essential part of the basic curriculum. Therefore, any state and local reforms seeking to increase standards and requirements should be inclusive of provisions for maintaining or upgrading programs of physical education.

In order to ensure the survival of existing programs in elementary physical education in the coming years, it will be necessary to develop and implement a variety of resources and supportive documentation. One resource that will soon be available is a physical education justification packet which is currently being developed under the direction of Vern Seefeldt at Michigan State University. The final report will include "documented research, project and survey results and statements relative to the importance of physical education in the daily lives of students," and has been identified by NASPE (Martzke, 1983a, p. 1) as a highest priority.

Statements supporting the value of physical education programs as essential to the development of children have recently been issued by the American Association of Fitness Directors in Business and Industry, the Special Advisors to the President's Council on Physical Fitness and Sports, the United States Olympic Committee Sports Medicine Council (Seiter, 1983, p. v-5), and the United States Department of Defense (Martzke, 1983b, p. 1). In the most recently issued of these statements, the Department of Defense recommended that all schools provide daily physical education programs, and that these programs should emphasize the following areas: "1. The attainment of an optimal level of physical fitness by all pupils. 2. Identification of the physically underdeveloped pupil and provision for appropriate, progressive, developmental physical activities to correct this condition. 3. Strong encouragement for schools and youth to strive for the Presidential Fitness Award and to support programs similar to the 'Fitnessgram'." (Martzke, 1983, p. 1).

It appears that we have reached a very critical point in the survival of quality programs in elementary physical education, and one in which we are in an opportune position to capitalize on the base of support which has begun to emerge. However, in order to capitalize on this opportunity we will need to call upon and spotlight our most valuable professional resource. We will need to give a more concerted effort to the development of exemplary programs in elementary physical education and to establish a greater visibility for those that currently exist.

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Where Fools Tread: Planning for Affective Outcomes in A Methods Course

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Once in a cultural anthropology class, the professor stated, "The most intimate thing anyone can ever do is to attempt to change your mind." Ever since the group function became evolutionarily critical, humans have been trying—with varying degrees of success—to change each other's minds. This paper addresses the concept of attitude revision as an important aspect of teacher preparation and what happened when an attempt was made to revise in a systematic way some preservice teachers' attitudes toward children's physical education.

Teacher educators are frequently faced with students who arrive in the teacher preparation program with a collection of positive, negative, and neutral attitudes about their chosen profession. Preservice teachers often have strong feelings about what their selected content is and how it should be taught. Some of their prevailing attitudes are productive in that they assist—at least initially—in the achievement of learning about the content and processes of a quality program for children. Neutral attitudes are available for redirection through persuasive communication or positive experiences. However, a positive attitude may be unproductive if it inhibits new perceptions of familiar content. For example, some students may feel so enthusiastic about football or cheerleading that it obscures their ability to perceive how inappropriate these activities are for first- and second-grade children.

The state of teachers' attitudes can play an important role in their curricular decisions. It is unique to the human service field in general, and perhaps physical education in particular, that the professional's attitude influences how well a content area is taught, and sometimes whether it is taught at all. The problem is that attitude development or revision is one of the neglected questions in research on teacher preparation. We don't know much about entering preservice teachers' attitudes, and we probably know less about how to change those attitudes we deem important to change (Briggs, 1982). Partly because of the paucity of research, we are not even very precise about what we mean when we use the word *attitude*. *Attitude* is sometimes used in a global sense, such as, "She has such a good attitude . . ." This can be interpreted in a variety of ways. It may mean that the person in question is an optimistic person who is a pleasure to be around, has positive attitudes that are congruent with the observer's, or both.

Sometimes, the term *attitude* is used synonymously with *enthusiasm*, and probably more is known about enthusiasm than attitude because it can be measured to some extent by behavior. A more useful view of attitude is that of Fishbein and Ajzen (1975) who consider *attitude* to be a multifaceted phenomenon.

Fishbein's and Ajzen's (1975) view of attitude begins with a belief component—what people believe about the importance of physical education for children based on experience and knowledge. The second and third components have to do with their feelings about (or attitude toward) physical education for children. These components lead to behavioral intentions—what they intend to do about the object. Figure 1 indicates the relationship of the various components of attitude in this model.

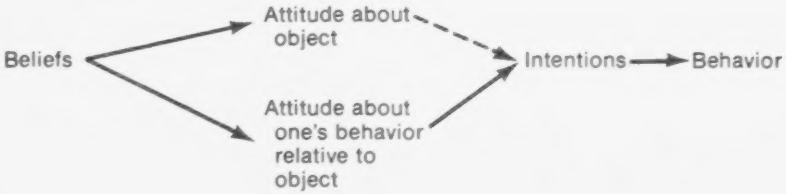


Figure 1. Relationship Among Components of Attitude

The behavioral intention component in this model is critical because research indicates that behavioral intentions are strongly correlated with actual behavior—much more than the feelings toward the object. This probably accounts for many of the conflicting findings in attitude research.

It is possible, for example, for teachers to have a good attitude about the importance of elementary physical education in the curriculum yet not act on those beliefs. The reasons for inaction may be legion. They can range from having a principal who prizes high achievement scores on the cognitive achievement tests more than any other classroom endeavor, to the teacher's lack of ability to teach physical education. However, if classroom teachers can be persuaded to change their intentions relative to teaching physical education, there is a greater chance of them actually behaving in a way that is congruent with their intentions.

The participants in this study were three groups of elementary education majors in a unit of a course in physical education for children. The instructional design model shown in Figure 2 is a modified version of Dick's and Carey's (1978). It is different from other instructional design models because it incorporates entry attitudes, beliefs, and intentions; and designates revised attitudes and beliefs as the basis for changing behavioral outcomes.

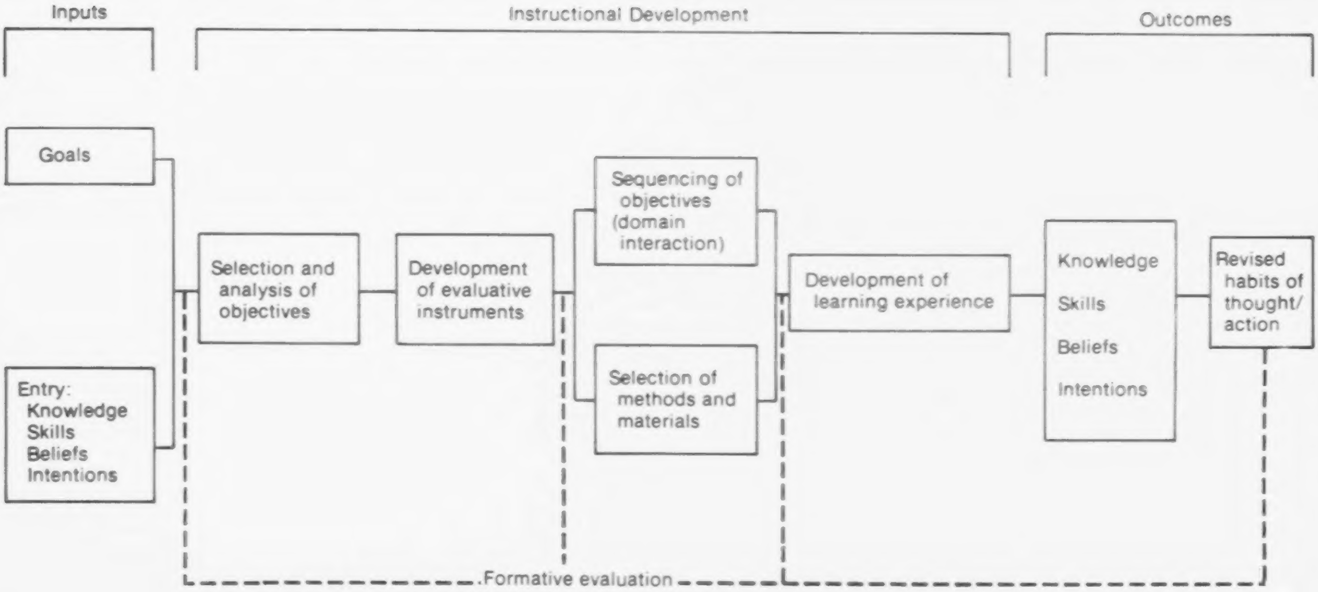
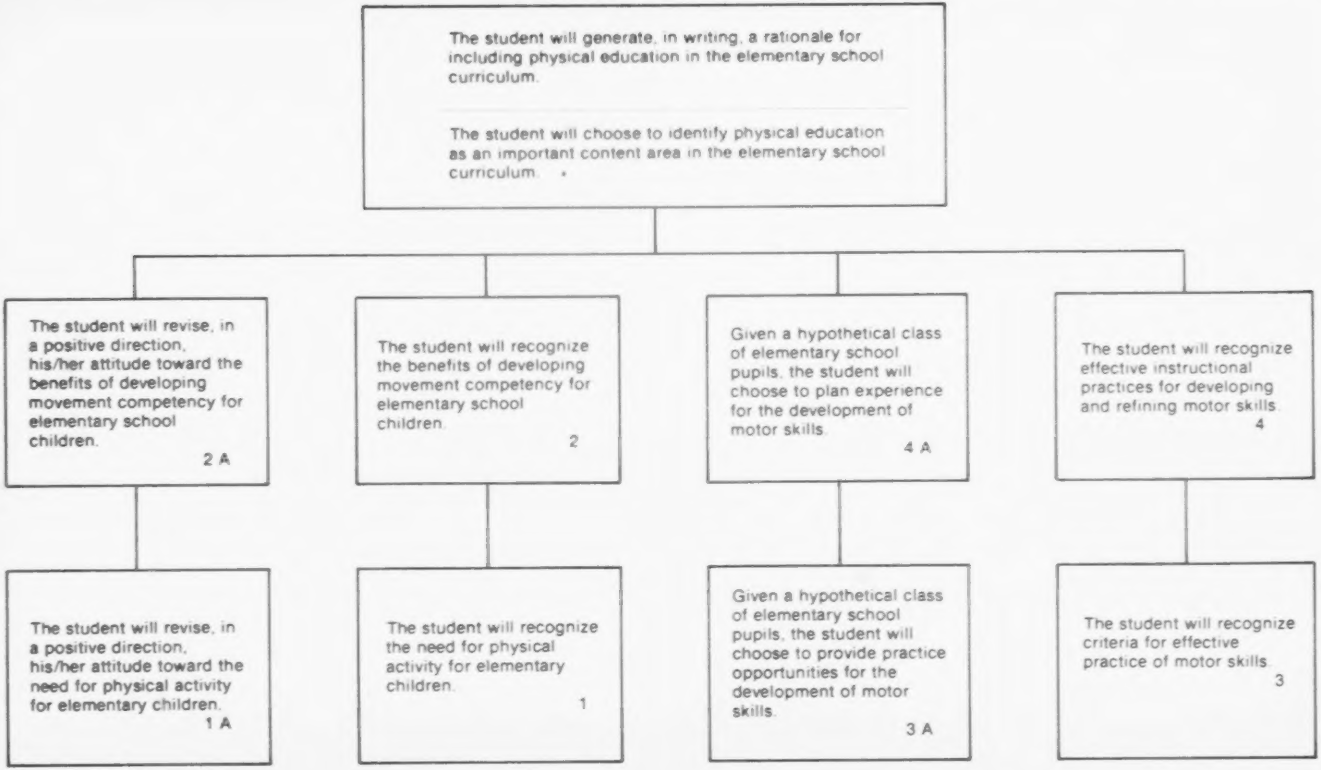

Inputs
Instructional Development
Outcomes
Goals
Entry:
Knowledge
Skills
Beliefs
Intentions
Selection and analysis of objectives
Development of evaluative instruments
Sequencing of objectives (domain interaction)
Selection of methods and materials
Development of learning experience
Knowledge
Skills
Beliefs
Intentions
Revised habits of thought/action
Formative evaluation

Figure 2: A Modified Instructional Design Model for Integrated Outcomes in Cognition And Affect



The student will generate, in writing, a rationale for including physical education in the elementary school curriculum.

The student will choose to identify physical education as an important content area in the elementary school curriculum.

The student will revise, in a positive direction, his/her attitude toward the benefits of developing movement competency for elementary school children. 2 A

The student will recognize the benefits of developing movement competency for elementary school children. 2

Given a hypothetical class of elementary school pupils, the student will choose to plan experience for the development of motor skills. 4 A

The student will recognize effective instructional practices for developing and refining motor skills. 4

The student will revise, in a positive direction, his/her attitude toward the need for physical activity for elementary children. 1 A

The student will recognize the need for physical activity for elementary children. 1

Given a hypothetical class of elementary school pupils, the student will choose to provide practice opportunities for the development of motor skills. 3 A

The student will recognize criteria for effective practice of motor skills. 3

Figure 3. Objectives for The Experimental Units. In this ICM, the unit was constructed so that each attitude objective has a matching information/intellectual skill objective. The attitude objectives are designated by an "A."

In this study, all three groups had the same instruction and learning experiences; they simply had them in different orders. Figure 3 shows the attitude and cognitive unit objectives. The attitude objectives are noted by an "A." Each attitude objective has a corresponding cognitive objective.

Figure 4 indicates the order of instruction for each of the three groups. Participants in the first group were instructed in the attitude objectives first and the cognitive objectives last. The second group encountered instruction in the cognitive domain before the attitudinal learning. In the third group, instruction in both attitude and cognitive objectives was integrated. Replicable instruction, consisting of films, videotapes, and written materials made up 60 percent of the total instruction. The instructor conducted the remaining 40 percent of the instruction using lecture, discussion, and summation techniques. The active learning experiences were systemized versions of those used in similar courses.

Group	Lessons of 75-minute duration				
	1st	2nd	3rd	4th	5th
ISO (Information and intellectual skills first)	Information, intellectual skills	Information, intellectual skills	Information, intellectual skills	Attitude	Attitude
AO (Attitude objectives first)	Attitude	Attitude	Information, intellectual skills	Information, objectives skills	Information, intellectual skills
CO (Information and intellectual skills integrated with attitude objectives)	Attitude, intellectual skills and information (in each lesson)				

Figure 4. Focus of Objectives in The Experimental Unit

To mitigate the design problems inherent in this study, several measures were taken for statistical control to rule out other plausible hypotheses. For example, a self concept test was used with some attitude preassessment before the unit was implemented. It was conceivable that the participants' self concepts and previous attitudes toward physical activity may have influenced their reactions to the treatments. As it turned out, the only measure that showed any change at all was the rating of previous physical education experiences. In many cases, participants had felt very positively about their previous physical education experiences when they began the course. By the end of the course, that attitude had changed. A number of them stated that, in retrospect, their experiences (mostly from the secondary level) had not been as sound as they first thought.

Attitude and behavioral intentions were measured in pre-tests, post-tests, and delayed tests using two instruments. The first was a 10-item Semantic Differential Scale (SD) which measured attitude toward elementary physical education. The second was a 35-item Behavioral Intention Scale (BID) comprising three subscores for different classroom populations. The BID measured the likelihood that the participants would behave in positive ways relative to their future students' physical education activities. No cognitive measures were taken before the unit, however, because in the formative evaluation phase, the pre-test had proved so demoralizing that it was eliminated.

There were no significant differences noted in the scores on the SD among the groups on either the post-test or the delayed test. There were significant differences between the pre- and post-test scores within all three groups, but not among them.

There were some statistically significant differences in the delayed test scores on the BID between the attitude instruction first group and the other two groups. In the unit post-test scores there were no significant differences among the groups. However, the delayed test scores of the group which encountered the attitude instruction first showed a steady incline from the pre-test through the delayed test. The BID scores from the other two groups rose in the unit post-test, but declined somewhat during the delayed test. There were mean differences among the groups relative to the scores of cognitive achievement, but none of the differences were statistically significant. This is not to say that the participants had not learned anything in the course. They had learned a great deal, but they did not differ among themselves much on the cognitive test scores.

One explanation for these results is that the SD scale is so obviously a test of attitudes that it may have biased the participants' responses from the beginning. This means that the pre-test scores may have been somewhat inflated, thereby washing out the effects of the treatment as indicated by the post-test.

Relative to the BID, students in all three groups ended up improving their scores. Only the "attitude first" group showed a steady increase over the course in all subscores in the scale.

Like most instruction studies, there are several limitations. The overriding limitation was probably researcher bias. In this study, the researcher developed, formatively evaluated, and subsequently delivered the instruction to all three groups. However, the extensive formative evaluation may mitigate this problem to some degree. The samples were small. There were only 95 participants who were used in the final comparisons: 28 in the "attitude first" group, 31 in the "attitude last" group, and 36 in the group in which attitude and cognitive objectives were integrated.

Intact groups had to be used here because not all of the instruction was replicable. The use of intact groups always poses a problem for educational research. This is a trade off that researchers have to negotiate between erosion of the experimental control and the integrity of a real experience. Randomization has been used in some instructional design studies involving methods courses. Participants in these studies complained about the use of all replicable instruction in a course which traditionally incorporated discussion and small group projects.

The strengths of the study lie in the preparation of the instructional materials and assessment instruments and in the generalizability of the findings. If, after replication, the results are consistent with this study, we might be able to conclude that direct instruction in the attitude domain early in the sequence of learning experiences will result in students leaving the course with improved behavioral intentions. It may be that increasing the salience of attitudes changes the students' modi operandi in subtle ways such that the instructor is conditioned to respond to the students more favorably—which itself may affect students' attitudes about the content. The realm of affective development is still relatively uncharted. If we want to tap the resources of that domain to enhance the quality of preservice teachers' preparation, we need to investigate further how to deal with attitude revision.

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The Preparation of The Elementary School Physical Education Specialist: A Two-year Post-baccalaureate Program Model

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The purpose of this paper is to present a program model that describes the rationale, scope, and sequence of a two-year, post-baccalaureate teacher education program with a specialization in elementary school physical education. The program was recently developed by the Faculty of Education and the School of Physical Education and Recreation at the University of British Columbia, Vancouver, Canada.

PROGRAM RATIONALE

The rationale for changing to a new program at this institution is based mainly on the knowledge emerging from research and from the collective craft knowledge of professionals involved in teaching and teacher education. As you may know, the need for change in teacher education has been well documented over the last decade (Lortie, 1975; Goodlad, 1983; Schaller and Lang, 1983; Gideonse, 1982). Those who read the *Newsweek* article, "Why Teachers Fail," were once again reminded, through the more popular literature, of the constant call for change in current practices in teacher education. Proposals for change are generally founded on three premises: first, there is an expanding knowledge about teaching and learning that must be considered; second, the professional role expected of teachers must shape their training; and third, the teaching role cannot be separated from the setting in which teaching takes place.

At the 1982 annual meeting of the American Association of Colleges for Teacher Education, the University of Cincinnati Dean of Education, Henrik Gideonse, called for a revolution in teacher education. He stated that "teacher education as it is currently practiced in the United States—a four year baccalaureate enterprise—is attempting to accomplish the impossible." He emphasized that both time and resources were insufficient to meet the goals of liberal and professional education. He proposed that liberal education goals including mastery of the content areas to be taught, exclusively require at least four years of undergraduate education. The professional education following the baccalaureate would further require a minimum of two academic years and would include didactic and clinical instruction in those professional areas known to be necessary for effective teaching. This would include, for example, knowledge in instructional approaches, curriculum models, diagnosis, evaluation, and classroom and behaviour management.

The case for more and better teacher education is made by other informed professionals and organizations. The well known educator B. Othaniel Smith (1983) states that adequate preparation cannot be provided in four years. Greenburg (1983), in examining the case for and against teacher education, concludes that "the case for teacher education still seems strong" but that "its present state does not represent the potential of what it could be" if there were improved resources, longer programs, comprehensive systematic treatment, and better students. Cogan (1975) proposes that "a graduate (teacher education) program of at least three years" is necessary if beginning teachers are to "possess even minimal competencies needed in contemporary schools." Summaries of studies of preservice teacher education programs with subject specialization include proposals for longer programs as a means to more effective teaching (Dossey, 1981; Luke, 1983).

The content of such extended programs is addressed by many authors (Gideonse, 1982; Smith, 1983; Schaller and Lang, 1983). In a recent document, "Essential Knowledge for Beginning Educators" (D.C. Smith, 1983), some of the most prominent North American educators focus on the question: What must teacher candidates learn in order to become effective teachers? Their views provide a beginning to the quest for a teacher education curriculum based on both research and craft knowledge about learning processes and effective teaching. The model explained in the following section includes many of the components of their proposals.

PROGRAM STRUCTURE AND ORGANIZATION

As Figure 1 indicates, the proposed professional program extends over two years and follows a four-year undergraduate degree. Admission requirements form the link and the filter between the two programs.

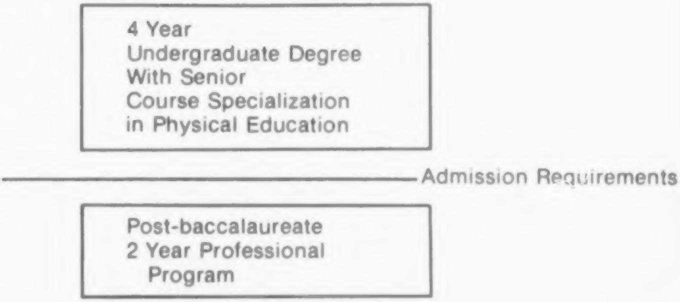

Figure 1. Program Structure

The need to develop and maintain a more stringent selective process for physical education teacher candidates has been stressed by Hoffman, Bowers, and Klesius (1975) and more recently by McBride (1984). The admission requirements in this model include written and oral English tests, a mathematics competency test, an autobiographical account of related experience, and a statement of motivation to teach. These have been identified as predictors of success in teaching (University of British Columbia, 1983).

After entry into the two-year, four-semester professional program, the teacher candidate progresses through four categories of courses, broadly described as education studies, professional studies, curriculum studies, and school experience studies. Education studies cover the four disciplines of history, philosophy, psychology, and sociology of education. Professional studies are concerned with the processes of teaching, learning, and communicating. Curriculum studies cover subjects that the students intend to teach in schools, in this case elementary physical education. Finally, the school experience gives opportunities for observing teaching in schools and physical education teaching practice.

This program model rests on a belief that most aspects of schooling and pedagogy are common across subjects and age levels but that some aspects are subject specific. The ideal balance of common elements and subject specific elements that teacher education programs should reflect is a crucial question. We all have opinions on this matter, but the real answer should emerge from future research on teaching physical education. Some light has already been shed on this topic by Daryl Siedentop in his opening paper of the Big Ten Symposium on Research on Teaching in Physical Education at Purdue University, 1983. He stated that early efforts in teaching research in physical education have produced data that look more similar to than different from classroom studies data, and that future research investigating more complex systems may even lessen these differences. He continues:

> To the extent that we verify the existence of generic teaching skills and a paradigm that is valid across subject matters and contexts, it will become more important that teacher education change so that the generic skills and paradigms become central program commitments, visible in terms of credit hours, course titles, field experiences, and even certification rules. But there is less reason to be optimistic here for although teacher education has changed somewhat as the result of recent teacher effectiveness research, it is clear that the changes have not been nearly as pervasive as one might argue they should have been. (p. 9)

Hopefully, the model presented here is a small change in the right direction.

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One From The Heart--A Minority Report

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It's been almost ten years since I last addressed the issue of teacher education and teacher education research, and the opportunity to make a presentation at this conference has stimulated me to bring my thinking up-to-date in this area. As I deliberated over what to say at this time, I thought it would be appropriate to dig out the presentation I made ten years ago in Atlantic City at the AAHPERD National Convention. Also, for the sake of our discussion here, I think it would be useful to present an excerpt:

> There are some underlying assumptions present which we have come to accept when we think of teacher education. We have incorporated them into our way of thinking so well that we have become blinded to alternate ways of seeing and doing things. These are the assumptions that I wish to call to your attention.
>
> 1. In the first place there seems to be an assumption about the nature of the human being that permeates this whole state of affairs. That is that a person is manipulable, capable of being directed, molded, shaped or to put it more politely "guided" into becoming what we deem it best for him or her to become. In the "guided," seemingly less structured programs, there is a sloppy kind of inefficient conditioning going on, whereas in the behavior modifying, competency based programs the conditioned responses seem to come about in a quicker, more direct manner. Now I do not deny that people are capable of being manipulated. There is more than enough evidence indicating the universality of that phenomenon. What I did object to is the subtle, discriminating way in which we make a value judgment on this practice. There is no clearer example of this than in the way we use words. For example when the Chinese use conditioning techniques we call it "brainwashing" and, when our own educators use it we call it behavior modification. This is done in all innocence and even with a sense of satisfaction and the ultimate tragedy is that we "educators" become so enamored when we see the quick, clean, efficient results of behavior modification (which often come to us, by the way, in the guise of "contingency management" or "competency based" instruction programs) that we fail to recognize its basic hypotheses of the nature of a person.
>
> 2. This brings me to the second assumption we make about teacher education which manifests itself in our concept of what a teacher or the act of teaching is. Inherent in our view of the teaching-learning process is an acceptance of the role of teacher as agent of change. That is to say that there is a presumption in our thinking about the educational enterprise—that it is the teacher's job to bring about change, to cause change and to act as a director towards specific goals or objectives. The emphasis inevitably makes the process a one way or one directional affair. The attitude leads to a separation of teacher and student.

> I choose not to conceive of the education endeavor in this light. For this reason I would eliminate the teacher-learning, teacher-pupil distinction. In fact I propose we eliminate the words teacher and teaching entirely. We are *all* learners.
>
> 3. The third assumption is that teacher education and teaching and learning is a scientific activity. I refuse to accept this. The teaching act or role is a way of behaving that is neither amenable to generalization nor scientific reduction. The teaching enterprise probably exemplifies more of an artistic piece of expression than a scientific one. The same may be said of the learning process which involves what may be called "insightful" experience; a leap that is based just as much on faith as it is on evidence. Leaps of this nature, I am convinced, are not scientifically explicable. To continue to search for answers to the questions of teaching and learning along the "scientific" and "empirically oriented lines" which our experimental, pedagogical mechanics seem bent on doing constitutes an enormous waste of time, effort and resources. What I am suggesting is that teaching-learning is a highly individualized affair capable of being understood, not in a generalized way, but in the continually changing series of particular experiences which appear at distinct and all too infrequent occasions. When learning occurs it is a *self* induced process. It is a private occurence—distinct, unique and somewhat different every time. It's difficult because all the factors are never the same. It adheres to something that may be called a *pedagogical principle of indeterminancy.* The only way I know to come to grips with it is to give yourself up to its infinite elusiveness and be prepared for its continual succession of surprises. Rejoice in its occurrences but beware of the dangers of arrogance. We are not the creators of these principles. More likely we are discoverers of secrets and witnesses to a happening often experienced in the blink of an eye. *The teaching act then becomes, from this perspective, an artistic expression of an insightful experience and learning may be termed as an insightful experience of an artistic expression.* The process is dialogue between self and other; the goal *is* the process. If schools can contribute to this process of self discovery and understanding, they will have served us well.[1]

These convictions voiced ten years ago about teaching viewed as artistic expression, if anything, have become stronger. But, I must confess that this position is as lonely today as it was ten years ago. Searching for material supporting this view didn't provide me with very much "positive reinforcement." However, I was able to find one essay which appeared in a recent issue of the *Phi Delta Kappan.*

> My view is based on the axiom that the *person* of the teacher is the essential ingredient in that mysterious interaction called teaching. (Teaching) a group of youngsters the standard secondary school curriculum . . . is not a routine activity but a human performance executed by an individual of unusual talent. People who can do this—like those who can sing, play musical instruments, act, sculpt, paint, or hit major-league pitching are rare. Such talents are innate, they cannot be developed beyond a mediocre level simply through intelligence, will power, and proper training. This is the old truism, 'teachers are born, not made' and, like many truisms, it may just be true."[2]

Dawe goes on to state that while "schools of education have done a credible job of training public school administrators and of organizing research on human learning" they have been manifest failures in training teachers, "because the art of teaching and the science of educational research are completely different activities."[3]

If this is true, and I believe that it is, then our teacher education researchers who attribute the crisis in teacher education to poor research or not enough research offer us no hope at all. My own inclination is to attribute the crisis to fundamental misconceptions about the whole business of teaching and learning:

1. I believe a distinction must be made between skill acquisition and understanding. Behavioral researchers regard and treat them as one and the same thing.

2. I think there are different dimensions of knowing and they must be identified. Our behavioral researchers seem to believe that knowledge and knowing can be reduced to a single formula universal in application. On the level of action, there are different dimensions of knowledge that cannot be regarded as having a common denominator.

3. The concept of choice, decision making, and freedom are neither romantic illusions nor totally predictable occurrences no matter how sophisticated or how many measurement techniques are developed. Behavioral managers, of course, would rather we thought differently. In their scheme of things, choice and decision making are illusory and nonexistent.

However, mathematicians and physicists are beginning to revise their ideas about predictibility even in the simplest of equations and physical occurrences. For example, in exploring a new field which has come to be called "chaos," they have found that "tiny differences of input quickly become overwhelming differences in output."[4]

> Physicists always assumed that when they saw a random relationship between what goes into a system and what comes out, the randomness had to be part of the system, in the form of noise or error. In a way, the modern study of chaos began with a creeping realization in the 1960s that, quite simply, mathematical equations produced results every bit as violent as a waterfall. Tiny differences in input could quickly become overwhelming differences in output—a phenomenon given the name "sensitive dependence on initial conditions.' In weather for example this translates into what is only half jokingly known as the Butterfly Effect—the notion that a butterfly flapping its wings today in Peking might affect the weather next month in New York. It is not a notion designed to give comfort to long range forecasters.[5]

(Nor should it give comfort to our teacher education researchers operating under the assumption that teaching-learning is a totally predictable phenomenon.)

A dripping faucet may serve as an illustration of how minimal input results in unpredictable results:

> A slow drip can be quite regular, each drop a little bag of surface tension that breaks off when it reaches certain size. But the size of the drop changes slightly depending on the speed of the flow and depending on whether there is a little rebound from the drop before. And that is enough to make the system non-linear. If you turn it up you can see a regime where the drops are still separate but the pitter-patter becomes irregular . . . It turns out, its not a predictable pattern beyond a short period of time. For scientists there is reason to pause when they explore systems as simple as a faucet and find that they are . . . eternally creative . . . To some physicists, chaos seems like a kind of answer to the problem of free will.[6]

This seems to confirm "a feeling, not always expressed openly, that theoretical physics has strayed far from human intuition about the world."[7]

How can we make sense of this chaos? Here, art embraces science and scientists begin operating as artists. Mitchell Feigenbaum, the leading scientific researcher in this area, has turned to art for answers:

> In the last few years, he has begun going to museums to look at how artists handled complicated subjects, especially subjects with interesting textures. 'Its abundantly obvious that one doesn't know the world around us in detail ... What artists have accomplished is realizing that there's only a small amount of stuff that's important, and then seeing what it was ... I truly do want to know how to describe clouds. But to say there's a piece over here with that much density—to accumulate that much detailed information, I think it is wrong. It's certainly not how a human being perceives these things and it's not how an artist perceives them.'[8]

If scientists are beginning to look at the way artists are operating perhaps it's time for our teacher education researchers to do the same.

Another matter I wish to address at this time is the nature of the subject matter in elementary physical education and our conceptions about that. For me, skill acquisition and physical fitness are not enough. However, I do not wish to negate their importance. In fact, it's nice to know that at last we are beginning to pay attention to skill development in physical education. I felt lonely taking that position among physical educators fifteen years ago who were, at that time, hell-bent on establishing physical education as an "academic discipline."

But now I want to argue for the necessity to recognize and establish physical education as art. And this, in turn, requires recognizing that an art form demands we attend to things like communication, expression, interpretation, and esthetics. Most of all, it requires encounters with the art forms and the artists. It means also that gaining proficiency in a variety of particular skills is as far removed from the art of movement as the person playing scales on a piano is from a pianist.

Thus, performance, insight, and appreciation of movement become the agenda for the physical education arts teacher. Of course all this requires a radical re-vision of games, sports, and play as they are practiced and taught in schools today. In addition, our approach to movement education must be changed. Some subtle and not so subtle assumptions about movement education at the elementary level need serious review. These assumptions are not stated boldly in so many words but they have infiltrated our conceptions of movement education in an attempt to justify its presence in the curriculum. The assumptions are:

1. Movement education is an elementary form of activity suitable for the young child only.

This is both a fallacious and limited view of movement education. If the art of movement is to be regarded as an important and sound experience, it must be offered throughout the entire educational sequence.

2. Movement education is a "lead up" experience which lays the ground for more "complex" highly organized games and sports taught at the secondary level.

This too is fallacious. It regards movement education as having no integrity of its own. But the art of movement has its own subject matter and must be treated that way. It is laudible that it is looked upon as having use for other areas. However, at the core, it has intrinsic value that offers students experiences and material they cannot get in any other way.

3. Movement education implies that a specific pedagogical methodology or technique must be practiced by the teacher in order to be "successful." That method has come to be termed "guided discovery."

Here, again, is the fallacious assumption that there is a "perfect" way to teach. All of us can cite examples in our own experience of encounters with teachers who, in spite of violating all firmly established rules of "good teaching," have proven to be our best teachers. The answer lies not in pedagogy but in the particular connections students and teachers make with each other—each case and each connection being individual, unique, distinctive. This is the "chaos" at work in the teaching-learning situation. Once the forces are set in motion, the outcome can never be determined.

NOTES

[1] "Notes on the Disestablishment of Pedagogy." (1975). Unpublished paper presented at AAHPERD National Convention, Atlantic City.

[2] Dawe, Harry A. (1984, April). *Teaching: A performing art. Phi Delta Kappan,* p. 549.

[3] Ibid.

[4] Gleick, James. (1984, June 10). "Solving the Mathematical Riddle of Chaos," *New York Times Magazine.*

[5] Ibid.

[6] Ibid.

[7] Ibid.

[8] Ibid.

Developing And Disseminating A Curriculum Model—Implications for Professional Preparation

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DEVELOPMENT OF THE MODEL

In developing the Every Child A Winner curriculum model, a formal needs assessment was conducted on the target population. Using the Washington State (Owens, 1984; Roberts, 1984; Georgia Dept. of Education, 1970) and AAHPERD Youth Fitness tests (Blackmarr, Owens, and Rockett, 1975; Earls, 1975; Georgia Dept. of Education, 1973a), selected items from the Minnesota Motor Skills Test, SRA Math and Reading Tests, and the California Inventory of Personality. This assessment revealed low fitness levels, deficiency in motor skills, and low scores on academic tests and measurements of self concept. In addition, high absenteeism and high drop out rates were found system-wide. No sequential, organized physical education program was provided in grades one through twelve, and classroom teachers had little or no training in physical education. There were no developmental playgrounds, and very little equipment was available (Owens, 1975). This information provided the basis for action, and a concerted effort for change was initiated (Roberts, 1984).

In 1970, the Georgia Department of Education granted funds through the Elementary Secondary Education Act, Title III (1969) to the Irwin County School System to address these needs. The project was funded to design a model elementary physical education program that would measurably improve fitness and motor skills and contribute to improvement in academics and the self concept (Georgia Dept. of Education, 1970).

While the first strategy for change was the needs assessment, the next was the organization of planning committees. Parents, teachers, and community representatives were contacted and informed of the results of the needs assessment and invited to serve on committees. These committees met regularly during the three-year period of curriculum development. At each meeting, a project progress report was given by the project director, future plans were developed, and curriculum materials developed by project staff were evaluated. Classroom teachers as well as project staff regularly evaluated the developing curriculum. At each stage of development, the planning committees approved and supported necessary changes. As new project applications were prepared, the overall project objectives and activities to reach these objectives were approved by the committees. Successful change began at the local level by local planners.

External evaluators and consultants were called on, as a third successful strategy, to assist the project staff in developing the model. National leaders in physical education submitted written recommendations for curriculum design and improvement, observed and evaluated the developmental program, critiqued lesson plans and materials in use, and gave inservice training to the project staff and classroom teachers. Each consultant provided a bibliography for use in developing a model resource library (Blackmarr, Owens, and Rockett, 1975). Experts in evaluation assisted in developing the project evaluation design and critiqued the final statistical report. The evaluation consultant assistance enabled the project staff to successfully implement the evaluation design and to prove that project objectives were reached (Earls, 1975; Georgia Dept. of Education, 1973a).

A fourth successful strategy for change was to develop and implement clear project goals, measurable objectives based on the needs assessment, activities to reach the objectives, and an evaluation design providing interim and final evaluation data. The project was managed by objectives, and the developing curriculum was organized in the same way. This plan gave the project clear direction and made clear curriculum planning possible. All curriculum decisions were based on evaluation data as well as consultant, planning committee, and staff recommendations (Georgia Dept. of Education, 1973b). From the beginning, each person involved with the Every Child A Winner project knew the answer to "what business are you in?" (Peters, 1982). The project was "in business" to make every child a winner by improving fitness, and motor skills and by enhancing academics and the self concept for children in grades one through six. All activities focused on these goals. Following an accountability plan gave a clear focus to overall project direction and curriculum planning. It was evident from this plan that project goals and objectives could not be reached with a traditional physical education program. To reach the objectives, a conceptual approach was needed; a change from the command style of teaching to the discovery learning method and to child designed games, dance, and gymnastics. The Laban framework was selected. Over the three year developmental period, this design met the project objectives. The program design has been field-tested since 1970, and in 1983 a new study was conducted to further validate program effect on fitness (Newfield and Baumgartner, 1983). Again, this curriculum model proved the most effective and capable of reaching the original project objectives.

The fifth strategy was to develop clear and regular communication with local, state, and national leaders from the political and educational communities. Networking with these leaders as well as with professional organizations impacting the project kept an information flow going out and coming into the project planners.

As a result of these strategies, and more too numerous to mention, an innovative curriculum was developed and implemented. A final statistical evaluation report was completed and two documents were published: *Every Child A Winner ... A Practical Approach to Movement Education* (Blackmarr, Owens, and Rockett, 1975) and *Every Child A Winner with Improvised Physical Education Equipment* (Irwin County Board of Education, 1973).

The curriculum, based on the Laban framework, provides developmental movement experiences for children centering on space awareness, body awareness, qualities of movement and relationships (U.S. Department of Education, 1983). The curriculum is still operating as a model in the original site and is funded by the local school district.

DISSEMINATION OF THE MODEL

In 1974, the project passed the Joint Dissemination Review Panel, U.S. Department of Education, to qualify for membership in the National Diffusion Network of Innovative Programs. National Diffusion Network (NDN) funding is provided "to promote the widespread installation across the nation of vigorously evaluated, exemplary educational programs" (Federal Register, 1984). A full description of NDN project requirements for funding may be found in the Federal Register, December 1983.

Again, a statement of clear training goals, measurable training objectives, activities ona time line for completion, and a clearly stated evaluation design proved successful. Management by objectives provided clear outcomes and quantitative data to report project progress, adopter school implementation, and student impact at adopter sites. All adopter training activities (awareness level, technical training, and follow up) provided by project staff were evaluated by participants. Project training materials were evaluated by the user, appropriate changes were made, and new materials were developed based on user evaluations and recommendations (U.S. Dept. of Education, 1980-1984).

Training materials developed for adopters based on their expressed needs and formal evaluations include "Every Child A Winner Lesson Plans," Levels I and II (Rockett and Owens, 1977; 1980), ECAW Adopter Training Manual, ECAW Adopter Evaluation Design, ECAW Trainer Manual, and Slide/Script Audio Visual Kits A1-A5. These materials are "user friendly" and have been field tested over a ten year period in seven hundred adopting school districts.

IMPLICATION FOR PROFESSIONAL PREPARATION

The National Diffusion Network has frequently been cited as one of the most successful school improvement programs funded by the U.S. Department of Education (Emrick, 1977; Lewis and Rosenblum, 1981). A formal school improvement study conducted by David Crandall and Associates (1982) entitled "A Study of Dissemination Efforts Supporting School Improvement" supports the strategies outlined in this paper. The National Diffusion Network dissemination model, used by the Every Child A Winner project, is further reviewed in Loucks (1983). New insights may be gained from these studies by anyone involved in curriculum development, preservice and inservice teacher training, and development of training materials.

From the NDN strategies described in this paper and documented by outside evaluators as successful, the following implications for professional preparation can be drawn:

1. Relevant curriculum planning and design should be a team approach with local school personnel participating in the process. College students need more instruction in relevant curriculum design during their course of study. Fragmented information on new techniques, methodology, and loosely organized activities is not supported by local school planners.
2. Training materials and college texts should be selected based on the author's field-tested experience with the material presented. Irrelevant "splinter skills" and "activities," which have no real bearing on the identified or perceived needs of elementary students, are rejected by local school officials, administrators, and physical education teachers.
3. Improved communication and networking skills are needed. Physical education students need more instruction in skills essential for working cooperatively with local school faculty, parents, political leaders, and community. They also need improved instruction in how to relate more positively to their students.
4. A serious study of field-tested, exemplary working models should be included in coursework for students, with more exposure given to demonstration sites conducting these models. Although it is encouraging to see that successful change strategies are being implemented, and a serious commitment to relevant curriculum change has been made by many involved in professional preparation as well as in local school systems, far more emphasis should be considered (Williams, 1984).

By teamwork, new and better strategies in physical education curriculum reforms are being initiated and can continue within the profession. Local school personnel and teacher preparation professionals, working together, can continue to improve the quality and effectiveness of programs offered to elementary students.

John Naisbitt (1982) in *Megatrends* reported that trends in America start at the local level and work upward; fads come from the top down. Will physical education continue to be viewed as a fad and a frill, or as an integral, necessary part of the educational process? Recent school improvement studies show that positive and lasting change starts at the local level. Does all this mean that perhaps each one of us in this profession must also change a little if our profession is to improve? Physical education is the most "basic" part of the educational curriculum. In a nation obsessed with back-to-basics, children will be the ultimate victims if physical education cannot become more accountable. Each one of us in the profession must continue to review and assess our personal participation in successful change and our personal response to the realities we face.

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A Systematic Teacher Training Model— A Viable Component to The Teacher Training Program

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American institutions have suffered criticism for their failure to adequately prepare preservice teachers for their future assignments. Medley (1973) points out that very little in the teacher education curriculum has been shown through research to positively influence teacher effectiveness. He claims that if all such courses were removed, only a few units of teaching methodology would remain. Gage (1972) adds that no one really knows what is actually taught in teacher education programs or whether what is taught is consonant with teacher needs. It is not surprising, then, that high levels of anxiety among preservice teachers have been reported (Coates and Thoresen, 1974).

A preservice teacher enters the teacher education program possessing those anxieties typically related to any new venture. These concerns and anxieties are compounded when the added pressure of performing well during the student teaching component in introduced. Despite these factors, most student teachers look forward to their teaching and want to do well.

Under these circumstances, the preservice program might well provide a rich and rewarding experience for these neophyte teachers. Unfortunately, in many programs, this does not hold true. Gilliss (1981) describes teacher education as still carrying "the stigma of requiring students to absorb dull and irrelevant theories which offer little assistance to the budding practitioner" (p. 8).

Rather than as a positive learning experience, teacher education programs are often perceived negatively by trainees. Preservice teachers have concerns about their teaching and, by and large, often do not feel adequately assisted in the procedure of becoming a teacher (e.g., Harlow, Dzuban, and Rothbey, 1973; Pigge, 1978; Tabachnik, Popkewitz, and Zeichner, 1980). Key concerns dealing with discipline, student motivation, student evaluation, and individualization of instruction have been cited as creating anxiety on the part of student teachers (Cruickshank, Kennedy, and Myers, 1974). Traditional student teaching programs do not appear to be having a positive effect on modifying these teacher anxiety and concern levels (Silvernail and Costello, 1983).

Follow-up studies of inservice teachers further allude to the ineffectiveness of many teacher education programs. Callahan (1980) revealed that teacher candidates felt their training in selected characteristics were only slightly valuable to their roles as effective teachers. Ryan and others (1979) report a common theme among first year teachers alluding to an awareness of the shortcomings present in their professional preparation programs. Even after two or three years in the field, many teachers still perceive their programs as having done little to prepare them for the realities of teaching (Goldhammer, 1981).

The evidence, in summary, suggests that trainees have concerns about their teaching that are not being adequately addressed in their training programs. Furthermore, practicing classroom teachers have indicated that teacher education institutions have repeatedly failed to emphasize and incorporate to a sufficient extent the skills or competencies they consider most critical to effective teaching. What appears to be needed in teacher education, then, is a program whereby the concerns of preservice teachers can be approached in a more individualized and systematic manner—The Systems Approach in Teacher Education.

Peck and Tucker (1973) have argued that a more systematic approach to general teacher education may be an effective alternative to the traditional program of independent courses followed by a student teaching experience. Some of the features of the systems approach they outline include: (a) precise specification of the behavior which is the objective of the learning experience, (b) carefully planned training procedures aimed explicitly at those objectives, and (c) measurement of the results of the training in terms of behavioral objectives (p. 943).

The systems approach is not new and has been successfully employed in military-technical training for years. Business enterprises, too, have used the systems model to solve operational problems in a more effective and efficient manner. The systems approach has been suggested as a mechanism to handle the logistics of performance problems in education as well. Currently, the systems approach is being applied to a variety of educational undertakings, including decision making processes, evaluation, and budgeting resources (Bishop, 1976).

Joyce and Weil (1978) state that most of the current systems models have three features in common: (a) diagnosis of needs, (b) program content, and, (c) assessment/evaluation. Bishop (1976) agrees and sees the systems approach as basically a method of analyzing a set of operations as a goal is moved from conceptualization to actualization. The basic systems model envisioned by Bishop contains three phases: (a) input, (b) process, and, (c) output.

The input phase focuses on identifying needs, thereby establishing the goals for the operation. The process involves implementing, managing, and monitoring the strategies that emerged from the previous phase. Finally, the output phase involves evaluating product effectiveness based on the goals first identified during the initial phase. If modifications are required, they become know through a feedback network, which is another part of the output phase. Figure 1 represents the systems model by Bishop.

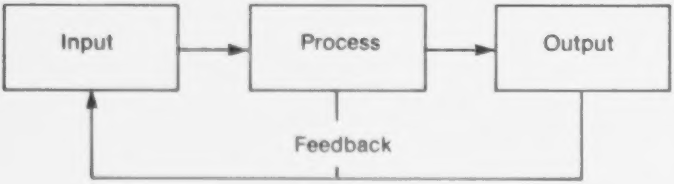

Figure 1. The Systems Model

OVERVIEW OF THE SYSTEMATIC TEACHER TRAINING MODEL

Considering the complexity of the teacher education process, any approach designed to educate teachers in a more individualized manner with a more structured format ought to be adaptable and flexible. That is, it ought to be capable of learning from its own operation. The Systematic Teacher Training Model (STTM) was designed, above all, with this objective in mind—to be "evolutionary rather than revolutionary; to capitalize on the diversity and adaptability of teaching and learning in the real world" (Gage et al., 1977, p. 1).

Thus, the STTM was not intended to represent the "one right way" to run a teacher education program. Attempts by researchers and practitioners alike to create and seek that "one right way" were regarded by the STTM designers as a problem that has plagued the field of education. The STTM, then, is intended to be a supportive component used in conjunction with the overall teacher education program, not a replacement for it.

Gage and others (1977) outlined what they considered three critical features for a teacher training program: (a) it must be designed to be self-corrective on a shorter time cycle, (b) it must provide individualized, specialized, responsive support for teachers, and (c) it must have the capability, or better, the goal of directing and supporting the diversity of teachers and the many kinds of environments in which they teach (pp. 2-3).

The STTM follows the general systems approach outlined by Bishop (1976), as well as incorporating the above features. Figure 2 illustrates the STTM. The model consists of the following seven organized and integrated components:

1. Selection/Diagnosis—a means of selecting, describing, and placing teacher trainees in a program of training experiences designed to fit individual trainee needs.
2. Programmed training—a programmed sequence of basic skills training suited primarily to the needs of inexperienced teachers.
3. Nonprogrammed training—a component consisting of an integration of training products and experiences designed to address individual teacher needs.
4. Practice—a laboratory or clinic in which teachers can practice recognized teaching skills and strategies or new methods of their own.
5. Assessment—information from observations, supervisors, and teacher

diaries are gathered and evaluated to determine any alterations or revisions of the trainee's program.

6. System revision—a means of revising the training content to meet the changing needs of the trainee.

7. Assignment/Follow-up—a means of counseling, assigning, and following up trainees after training.

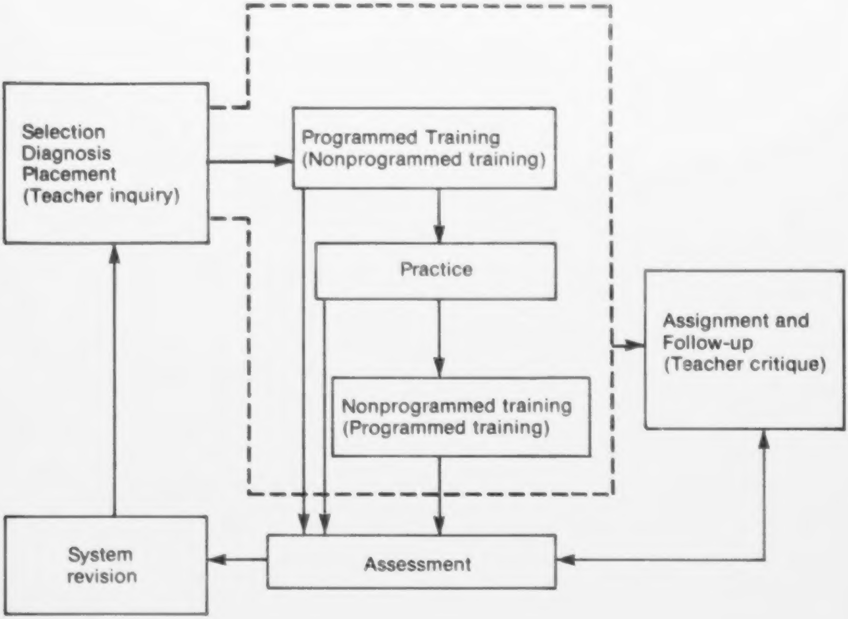
Selection
Diagnosis
Placement
(Teacher inquiry)
Programmed Training
(Nonprogrammed training)
Practice
Nonprogrammed training
(Programmed training)
Assignment and
Follow-up
(Teacher critique)
System
revision
Assessment

Figure 2: System of training for inexperienced or experienced teachers: Schematic representation of the teacher training system showing flow of information (solid lines) and flow of inexperienced trainees (dashed lines) through the system. Labels in parenthesis indicate the form of the components when used for experienced teachers. (Source: Gage et al., 1977.)

DIAGNOSIS

If a training system is to be effective, the ability to detect and diagnose specific kinds of training needs is imperative. Decisions regarding diagnosis will determine the course of action for the remainder of the training model. Diagnosis of a training need can be obtained from several sources: (a) responses to a concerns questionnaire/checklist, (b) an interview session with the trainee in which an accurate record is kept (e.g., audiotape),

(c) observations from a supervisor/cooperating teacher or, (d) the trainee identifies a problem.

Early and accurate identification of a training need is crucial if a supportive program is to be formulated and implemented. The import of the diagnosis component to the STTM, then, cannot be stressed enough.

Programmed Training

Once a need has been diagnosed, a programmed series of training experiences can be initiated. The programmed training would have specific objectives and competencies that a trainee must satisfy before proceeding to the next element of the series. The programmed series might conceivably include such tasks as: (a) skill training in giving verbal instruction, questioning techniques, and listening skills; (b) strategies for fomenting student motivation; (c) instruction in classroom management and discipline; and (d) instruction in subject area curriculum development/implementation.

Nonprogrammed Training

Nonprogrammed training can be described best as the creative component of the model. Here, the trainee is exposed to a host of experiences and training products. Facilities such as curriculum laboratories and teacher automats can be called upon to serve as sources for an array of training films, manuals, and tapes from which innovative and unique training experiences can be invoked.

Practice

A key component of any training system has to be the element of practice. The STTM allows for intensive teaching practice in (a) tutorial dialogue, (b) microteaching with small groups and, (c) regular classroom teaching. The trainee would practice in increasing increments until teaching is performed in a regular classroom setting. Repetitive trails and detailed feedback to the trainee would accompany each practice teaching session.

Assessment And System Revision

Although assessment is presented as one of the final components of the STTM, it actually occurs concurrently with each of the previous components. Each component is assessed before proceeding to the next. Thus, both trainer and trainee are provided immediate feedback on the effects of the training that, in turn, will serve as the basis for future training decisions.

Collected data would be used to judge the adequacy of the training and to revise the system on an ongoing basis. The efficiency and effectiveness of the system is enhanced by circumventing potential time, energy, and money losses due to inappropriate decisions and courses of action. This is perhaps the heart of the evolutionary and adaptability concept on which the system is founded.

Assignment And Follow Up

Upon successful completion of the programmed, nonprogrammed, and practice components of the system, a trainee would be ready for placement in the "real" school environment. Introduction to regular teaching duties would be gradual, commencing with classroom observations, limited involvement such as working with small groups and, finally, full classroom responsibility.

Follow up is often ignored in teacher training systems, but can be one of the most enlightening components of all. Maintaining contact with trainees after program completion can provide a trainer with evidence of the success (or failure) of the training. Further, the follow up component serves as a support system of information and materials for new concerns that will continue to emerge as the trainee matures in teaching.

CONCLUDING COMMENTS

As the term *system* implies, the STTM consists of integrated elements—each designed to serve its own specific function while also supporting the other components. The STTM is not just a loose assortment of training experiences; it has been designed to be self-sufficient and adaptive with an evaluation and feedback mechanism built in.

The heterogeneity and complexity of any teacher education program precludes adopting one monolithic system. Consequently, I have endeavored to identify and describe the form of the STTM, not its content. Because the form has been documented rather than specific content matter, one can note that the system is not only exportable to other sites, it can also be modified to fit the specific circumstances of each location.

Until recently, the STTM remained just "another theoretical model." However, I undertook (McBride, in press) an exploratory study that utilized the STTM with a group of preservice teachers from the Stanford Teacher Education Program (STEP). The results proved encouraging. Although further testing would be required to substantiate the projected results, the data indicate that this model has real applicability in a practical teaching situation. The more that can be done to reduce potential problem areas, the more effective and rewarding the teacher education program should be for all individuals. The STTM appears to be a positive step in this direction.

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Professional Issues for Elementary School Physical Educators in Developing Daily Physical Education Curriculums

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The common and consistent view reflected in the diverse range of research and medical opinion regarding cardiovascular disease risk factors is that hypertension, obesity, smoking, elevated blood lipids, and physical inactivity are common in modern society, and increasingly occur with age but may begin in early childhood. (Court, Hill, and Dunlop, et al. 1974; Wilmore and McNamara, 1974; Voors, et al. 1976; de Groot, et al., 1977; Gilliam, et al. 1977; Gilliam, et al. 1978; Lauer, et al. 1978; Morrison, et al., 1979; Blackburn, Carleton, and Farguhar, in press; Mittlemark, et al. 1983).

Epidemiological studies indicate that the rate of occurrence of cardiovascular disease is largely determined by the environment, therefore, health intervention programs—especially those focusing on smoking, eating patterns, and physical activity patterns of children and youth—may help prevent or at least reduce cardiovascular disease (Perry and Murray, 1982; Perry and Jessor, 1983; Marmot, 1979). A specific review of physical activity patterns of children and adults provides some interesting insights into the significance of this area of lifestyle intervention programs as described by the Minnesota Heart Health Program (1980). "Despite a surge of interest in exercise and fitness during the seventies, recent polls show that only about one-third of American adults engage in regular exercise several times per week and about one-half at least once a week. This represents about twice as many as were exercising in 1960." In terms of children's exercise habits "it is estimated that only one-third of children and adolescents in the United States ages 10 to 17 years participate in daily school physical education programs with the annual rate declining" (Minnesota Heart Health Program, 1980, p. 7).

One specific physical activity intervention study conducted over an eight-month period in Michigan determined physical activity patterns of children (N = 59) by recording heart rates before and during special exercise classes while a control group took regular physical education classes. "Baseline data revealed that both groups had similar activity patterns, that the children seldom attained a heart rate greater than 60 beats per minute, and that the boys expended significantly more energy per day than the girls. The activity patterns of children in the experimental group improved significantly." (Gilliam, et al. 1983, p. 21).

From this study it was concluded that:

1. Children are not as active as they may appear; they do not voluntarily engage in high intensity activity. If adult standards for the improvement of cardiovascular fitness are applied to children, 60 percent of the heart rate range [0.6 (maximal HR-resting HR) + resting HR] should be maintained for 25 to 30 minutes. For children aged 6 to 9, this target heart rate, based on a resting heart rate of 85 beats per minute and a maximum heart rate of 215 beats per minute would be approximately 160 beats per minute.

2. Daily activity patterns can be modified. The intervention program, consisting of vigorous physical activity, contributed to a significant improvement in the daily activity patterns of the experimental children.

3. Girls are less active than boys. The data show, however, that given the opportunity, girls will substantially increase their activity levels, making them comparable to or greater than the levels of most moderately active boys.

4. School systems need to promote vigorous physical activity in physical education programs, and they should teach cognitive aspects of exercise and nutrition and examine their relationship to CHD and related diseases. (Gilliam, MacConnie, Geenen, Pels, Freedson, 1983, 21-24). The evidence clearly indicates the need for planning school-based programs that will promote and maintain increased physical activity patterns by children and adolescents as one way of developing cardiovascular health.

THE SCENE IN AUSTRALIA

In Australia, numerous surveys and research findings were also providing evidence of multiple coronary heart disease risk factors in children (National Health and Medical Research Council, 1979; Australian Schools Commission, 1979).

A survey study of 2,500 New South Wales school children in the Sydney Coronary Heart Disease Prevention Programme, reported that 30 percent of the children were overweight or obese, and 20 percent to 30 percent were smokers (Simons, et al. 1982). Other research findings, documented increasing patterns of inactivity in children associated with increasing television viewing (Senate Standing Committee on Education and the Arts, 1978). The SHAPE (School, Health, Academic Performance and Exercise) project (Coonan, et al. 1979) concluded that "the body composition of South Australian school children suggests that an excessive number of students, particularly girls, are obese whilst many more have unnecessarily high percentages of body fat." Fanning (1979) highlighted this concern further when concluding that "cohorts of obese children are moving forward into adult population to produce even more obese adults." Similar research findings were being documented in other states as well as findings regarding poor motor performance and fitness levels associated with limited physical recreation participation levels of school children (Jeans, 1980; Hawkins, Carpenter, and Mahon, 1981).

APPLIED RESEARCH AND DEVELOPMENT

It was evident that a need existed to improve the level of fitness of Australian children while also encouraging the development of physical skills conducive to the constructive use of leisure time. Exercise and activity programmes on a daily basis were seen as the most effective means of counteracting this trend and assisting children to use their leisure time constructively. Thus, the well known Vannes Primary School experiment, France, 1961, was used as a model for two similar projects in South Australian schools. The first of these in 1977, called the Hindmarsh Pilot Project and in which two classes of children were programmed for two extra hours of physical education per day, generally supported the findings of overseas studies: "The Hindmarsh students covered the same work in less time and with better results. In so doing, they became more self-confident, fitter, more skillful (physically), more sociable and the obese became slimmer." (Coonan, 1978).

The second project, SHAPE, was a joint study between the South Australian Education Department's Physical Education Branch and the CSIRO Division of Human Nutrition involving eight primary schools and in excess of 500 ten-year-old pupils. Three classes in each school were randomly allocated to either a control, fitness, or skill group. The fitness and skill groups spent fifteen minutes each morning and one hour each afternoon engaged in organized physical activity. The emphasis for the fitness group was on cardiovascular endurance activities; the skill group focused on activities which improved perceptual motor skills. The control group continued with its normal school programme of three half-hour physical education lessons per week, with little emphasis on endurance activities. This study determined that "the fitness groups, in particular, and to a lesser extent the skills groups, made substantial health gains in comparison to the control group. Both groups also made significant gains in the psychological and social areas. Importantly, these benefits were obtained without any evidence of an adverse effect on academic performance." (P. E. Branch, Department of Education, 1981, p. 5).

The case for daily physical education was increasingly evident and summed up as follows: "Daily physical activity is necessary for the achievement of the major objectives of physical education programmes. It is not possible to conduct a truly effective programme in the three half-hours per week which many schools now allocate for the purpose. The research suggests that a daily period of forty-five minutes is a desirable minimum" (Physical Education and Sport, 1978).

PROGRAM DESCRIPTION

Following extensive resource collation, writing, and materials trials by experienced teachers, the daily physical education curriculum programme became a reality. It is designed to be presented to children at each year level in a daily 15-minute fitness session and a daily 30- to 45-minute skill lesson. The fitness sessions comprise a wide variety of vigorous activities. The skills lessons, which are intended to be programmed separately from the fitness sessions, cover movement exploration and gymnastics, games skills, dance, swimming, water safety and aquatics. The programme consists of 155 skill lessons for grade levels one and two and 160 for grade levels three to seven. These lessons constitute the core of the programme and include revision and extension lessons. Ideas are provided for further extension lessons to be used at the teacher's discretion. This material provides for five lessons per week for up to 32 weeks of the school year. From the experiences of teachers during trials this was suggested as a realistic amount of work to be covered in one school year allowing school camps, sport days, and excursions to be integrated throughout the year.

The aims of the programme for each year level emphasize the development of the positive attitudes that stem from achievement in and enjoyment of a wide range of movement experiences. The differing emphasis for each level and the sequential nature of the learning experiences presented in the programme are clearly described in the organization section of the lesson notes. The lessons are presented in levels, enabling work selection according to class ability. The Organization Guidelines sections of each manual provide teachers with the essential information needed to begin the programme including:

Daily physical education philosophy
Benefits of the programme
Goals of the programme
Essential learning experiences
Scope of the programme
Curriculum integration
Accommodating individual differences
Evaluation
Medical information
Annual medical information form
Time tabling
Presentation of the programme
Lesson presentation
Programming
Sample term programmes
Clothing and footwear
Equipment requirements
Class organization

Supplementing this material are posters, daily physical education logo stickers, class activity calendars and progress stamps, parent information brochures, and pupil workbooks for recording and evaluating through self-testing their own progress in activities.

IMPLEMENTATION OF THE PROGRAM

Acceptance of the Daily Physical Education material for the seven levels of primary school has been widespread throughout Australia. In South Australia, the state of origin, more than 50 percent of the primary schools have adopted the entire programme of physical education. Perhaps this is not surprising given the situation that currently, and at least into the immediate future, the responsibility for the primary school physical education programme rests predominately with generalist classroom teachers who have little experience in physical education.

Pressure is mounting from post-primary and secondary schools for a similar programme appropriate to their needs, but difficulties of time-tabling, coordination with other subject specialists, and related organizational difficulties peculiar to secondary schools are forestalling these initiatives. Surveys of teachers opinions regarding the impact of the Daily Physical Education

Curriculum in primary schools are being undertaken annually (1983, 1984) upon which further organization, planning, and implementation decisions are based. The need for supplementary publications is also based on such information.

PROFESSIONAL ISSUES IN INITIATING AND MAINTAINING THE DAILY PHYSICAL EDUCATION PROGRAM

Regardless of the quality and comprehensiveness of any curriculum resource, the quality and maintenance of physical education programmes are ultimately determined by the professional integrity and performance of the teachers, whether they are trained physical education specialists or generalist classroom teachers. Similarly, no curriculum package can succeed without adaptation to local school or district needs. The Daily Physical Education Curriculum is readily adaptable to varied organizational and implementation strategies and individual and diverse pupil needs. However, supportive school administrators, committed staff, and cooperative school governing councils and parents are essentially ingredients in the process. Competent and knowledgeable curriculum leaders and advisors also need to be readily available to provide inservice training for school staff. Teacher educators need to keep abreast of latest curriculum developments so they can share this knowledge with students as part of their professional preparation programmes. Continuing pressure for support of the daily physical education concept must also be exerted on educational decision making and funding authorities by professional associations. Such processes of change are operating in Australia so that the implementation and maintenance of quality daily physical education programmes throughout the nation, particularly at primary school level, will remain a crucial physical education issue.

In conclusion, it may be best to leave the final sentiments regarding this total approach to physical education and personal lifestyle improvement as embraced by ACHPER's Daily Physical Education resource manuals and accompanying pupil workbooks to Dr. Peter Moody (Assistant Professor, School of Physical Education and Recreation, Faculty of Education, University of British Columbia, Vancouver, Canada), who described it as "qualitatively and organizationally the best national movement in Physical Education of which I am aware. The promise of this campaign is enormous . . ." (Moody, 1984).

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PROGRAM MODELS SECTION

Program models for the conference were selected from submitted papers to represent different ways of organizing preservice curriculum for different purposes. Included in this section are several models leading to K-12 certification, a dual certification program, an elementary minor program model, and a program with a concentration in elementary physical education. Space limitations does not permit full presentations of these programs in the proceedings. You are encouraged to write to the author for more information on a program.

Professional Development in Elementary And Physical Education At Simon Fraser University

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The Physical Education Minor program for elementary school teachers is one of four specific professional minors offered in the Professional Development Program of the Faculty of Education. The main characteristics of the Professional Development Program are:

- the differentiated staffing model
- the equal division of time between school practica and university coursework
- the strong focus on clinical supervision by school and faculty associates and self-evaluation by the student teacher
- the interrelationship of preservice and inservice in the areas of curriculum development and implementation

In Fall 1984, two hundred students will be admitted to the three semester Professional Development Program (elementary). Sixteen elementary physical education (PE) minor students will be selected.

PROGRAM CONTENT

Semester 1—total of 7 weeks in school, 7 weeks on campus. All students are required to enroll in two courses which run concurrently: 1) Education 401-8, Introduction to Classroom Teaching and 2) Education 402-7, Studies of Educational Theory and Practice. PE minor students must enroll in the PE curriculum workshop and attend an additional PE seminar as part of 402. Grading is pass/withdraw.

Semester 2—14 weeks in school. All students are required to enroll in one course: Education 405-15, Teaching Semester. PE minor students are given classroom and extra PE teaching assignments. Grading is pass/withdraw.

Semester 3—14 weeks on campus. This semester is known as Education 404, Semester on Campus. Students are required to take 14-16 semester hours of university coursework in education or other faculties to complete the professional, academic, and certification requirements. PE minor students are required to take: 1) Education 459-4, Instructional Activities in Elementary School Physical Education, and 2) Education 479-4, Designs for Learning: Physical Education. Grading is by the regular university 4-point system.

PROGRAM PROCESS

Admission to the Professional Development Program (PDP) is competitive. General Admission requirements for the Elementary program include:

- a minimum of 60 semester hours (two years post-secondary credit)
- two courses in English and one course in each of Canadian history, Canadian geography, mathematics, and a laboratory science
- two reference letters (character reference and work experience).

Prior to entering the PE minor program, it is recommended that students have credit for three lower level courses selected from kinesiology, psychology, and education. Students apply for and enter the minor program during the first PDP semester. To remain in the program, students must successfully meet the program objectives set out for Education 401/402.

In the 401 seven-week practicum, the students are placed in teams consisting of two students, a teacher (school associate), and a faculty associate, whereas in the 405 fourteen-week practicum the team consists of one student, a school and a faculty associate, and one member of faculty.

In the 405 practicum, students have special placements in elementary schools that allow them to teach the full range of classroom subjects to one grade level and physical education to both primary and intermediate grades. They teach a minimum of six and a maximum of ten periods of PE throughout the fourteen weeks.

The evaluation for each practicum is carried out by a team consisting of the student, the school and faculty associate, and one member of faculty.

UNIQUE PROGRAM CHARACTERISTICS

The Faculty of Education operates on a differentiated staffing model to ensure the balance of theory and practice—student teachers form part of a close knit team which consists of school associates (experienced teachers working in the public school system), faculty associates (master teachers seconded from the schools to the University for one or two year appointments), and faculty.

The design and its staffing model are exploited to maximize the impact on curriculum and professional development in the Province. British Columbia is large, eight times the size of Florida. Some students complete their 405 teaching semester in schools as far as seven hundred and fifty miles from the university, so we spend a lot of time flying to cover all the territory!

FACULTY SIZE AND CHARACTERISTICS

There are no departments in the faculty. Faculty work in three program areas, graduate, undergraduate and professional development. This year, there are 35 faculty (2.5 PE), 24 faculty associates (2 PE), and approximately two hundred school associates (24 PE).

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A Coordinated And Sequential Physical Education Teacher Preparation Program for Grades K-12

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The University of South Florida Professional Physical Education Program is an upper division program having equal emphasis on elementary and secondary teacher prepration and leading to physical educator certification for grades K-12. The Professional Physical Education Program is a unit of the University's College of Education, and approximately 66 percent of the College's 1,347 undergraduate students are transfers from junior colleges or other universities.

The program staff consists of eight faculty members who are involved in one or more elements of the undergraduate program. The faculty primarily teach physical education courses for teachers at both the undergraduate and graduate levels, and typically the faculty have twelve semester hours of course assignments each full academic term.

When program admission was unlimited, as many as 100 students entered the program each year. With the introduction of selective admissions (see Hoffman, Bowers, and Klesius, 1975) in 1973, a yearly quota of 70 junior-year students was established; but with declining student enrollment, approximately 50 students enter the program as a class, each fall semester.

The Professional Physical Education Program philosophy embraces early field experiences/internships at the elementary level as well as an internship at the secondary level and an interrelated and sequentially scheduled course of study. Additional program features are concern for the students' personal-professional development and equal emphasis and preparation for teaching elementary and secondary school physical education.

The Professional Physical Education Program has operated since 1967 with two primary course sequences: Human Kinetics—Applied Human Kinetics sequence and the Seminar—Field Experience/Internship sequence. The latter sequence serves the internship teaching experience and pedagogical seminar function. The Human Kinetics—Applied Human Kinetics sequence is designed to develop competencies related to the scientific foundations of physical education, movement education theory and practice, and movement analysis and skill learning aspects of teaching physical education. Table 1 is the master course schedule in which the junior year of the two-year program focuses on preparing elementary school physical education specialists.

Table 1. Master Schedule, Junior Year

Semester I		**Semester Hours**
PET 3943	Seminar and internship in physical education (b)	5
PET 3372	Human kinetics I (a)	6
PET 3434	Movement education: Theory and application I (a)	3
EDF 3214	Human development and learning (c)	3
		17

Semester II		**Semester Hours**
PET 3944	Seminar and internship in physical education (b)	5
PET 3381	Human kinetics II (a)	6
PET 343C	Movement education: Theory and application II (a)	3
EDF 3604	Social foundations of education (c)	3
		17

Semester III		**Semester Hours**
EEX 4007	Exceptional student education (c)	3
HES 2400	First aid	2
PEQ 3103	Aquatics	2
PET 3001	Individual assessment (a)	2
		9
	Junior Year Total	43

Senior Year

Semester I		**Semester Hours**
PET 4361	Applied human kinetics I (a)	4
PET 4362	Applied human kinetics II (a)	4
EDG 4200	Curriculum and instruction (c)	3
EDF 4430	Basic concepts of measurement (c)	3
RED 4310 RED 4337	Reading for the child or Reading in the secondary school (c)	3
		17

Semester II		**Semester Hours**
PET 4943	Seminar and internship in physical education (b)	5
PET 4944	Seminar and internship in physical education (b)	5
PET or EDU	Elective	3
		13
	Senior Year Total	30
	Program Total	73

(a) indicates inclusion of this course in the Human Kinetics—Applied Human Kinetics Course Sequence.
(b) indicates inclusion of this course in the Seminar—Field Experience Internship course sequence.
(c) indicates legislative or college mandated course.

Student personal-professional development is enhanced by the continuing two-semester elementary school level Seminar—Field Experience/Internship observation and evaluation by one professor, by faculty interaction and shared responsibility for student progress, and by the program's counseling process. The counseling process begins during the program orientation phase of the selective admissions process and is initiated when a student exhibits an academic or professional behavior problem in two or more program courses. Upon identification of a problem, the student meets with a committee, the problem is discussed, and a plan to resolve the problem is established. The committee supports and monitors the student's progress and if improvement is not forthcoming, either adjustments are made in the plan or administrative steps are taken to prevent the student from enrolling in further program courses.

For eighteen years, this program has prepared teachers with equal emphasis on elementary and secondary school physical education. The nature of this program is clearly expressed by a quote from an article by Bowers, et al. (1970).

> The program . . . seeks to contribute to positive changes in the self-concept, confidence, knowledge, skills, and values of each major as a professional. This takes commitment from faculty and students alike to be involved in a program which attempts to make learning an active experiential process, provides knowledge which is immediately applied in a real teaching experience, and makes the teaching experience give meaning to theory and create motivation for deeper inquiry. (p. 25).

The process of the program is part of the content, and the interaction among the faculty and students becomes a model for professional commitment.

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Teacher Certification Program At The University of South Carolina for Grades K-12

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DEMOGRAPHIC DATA

The Department of Physical Education at the University of South Carolina is one of seven departments in the College of Health. The Department of Physical Education houses the only undergraduate program in the College of Health; 175-195 students major in physical education. Approximately 130-140 students have declared teaching as their program emphasis.

PROGRAM CONTENT

The program for teacher certification is 138-143 hours, and there are subdivisions in three areas: general education, physical education content, and teaching and learning theory. Following is a list of specific courses in each area:

I. General Education: (58-63)

A. Language skills and literature (12)

English 101 (3): Composition
English 102 (3): Composition and literature
English 287 (3): Major writers American literature
English 288 (3): Major writers British literature
Theater 140 (3): Public communications

B. Aesthetics (3)

Art education 359 (3): Interdisciplinary relationships in the arts

C. Natural and biological sciences (19-20)

Biology 110 (4): General biology
Physics 101 (4): Introduction to physical science I
Physics 102 (3): Understanding energy; *or*
Chemistry 101 (4)
Anatomy and physiology 223 (4)
Anatomy and physiology 224 (4)

D. Mathematics/Foreign language (6-10)

Math 121 (3): College algebra
Math 122 (3): Calculus for B.A. and social science; *or*
Statistics 201 (3): Elementary statistics; *or*
Computer science 206 (3): Scientific application program; *or*
Foreign language (7)

E. American and world culture (12)

Psychology 101 (3): Introduction to psychology
Sociology 101 (3): Introduction to sociology
Social sciences electives (6)

F. Health (6)

PEDU 300 (3): First aid and athletic injuries
HEDU 221 (3): Personal and community health

II. Physical Education Content: (32)

A. Scientific foundations (10)

PEDU 351 (3): Acquisition of motor skills
PEDU 530 (4): The physiology of muscular activity
PEDU 535 (3): Biomechanics of sport and exercise

B. Professional studies (12)

PEDU 232 (3): Philosophy and principles of physical education
PEDU 545 (3): Measurement and evaluation in physical education
PEDU 553 (3): The organization and administration of physical education
PEDU 562 (3): Adaptive PE for the exceptional individual

C. Motor skill competencies (10)

Dance (1) Individual and dual sports (1)
Fitness (1) Racket sports (1)
Gymnastics (1) Indoor team sports (1)

Outdoor Pursuits (1) Swimming (1)
Outdoor team sports (2)

III. Teaching and Learning Theory: (48)

A. Pre-core (13)

EDUC 201 (3): The learner
EDUC 202 (3): The school and the community
PEDU 203 (3): Perceptual-motor development
PEDU 190 (2): Introduction to physical education I
PEDU 191 (2): Introduction to physical education II

B. Core (21)

PEDU 226 (3): Physical education for children
PEDU 340 (1): Practicum in preschool and elementary school PE
PEDU 360 (3): Movement skill development
PEDU 341 (1): Practicum in middle school PE
PEDU 361 (3): Skilled movement patterns
PEDU 440 (1): Practicum in secondary school PE
PEDU 462 (3): Specialized movement skills
PEDU 451 (3): Analysis of teaching
PEDU/EDUC 446 (3): Curriculum in physical education

C. Practicum (14)

PEDU 240 (1): Observation of physical education I
PEDU 241 (1): Observation of physical education II
EDSE 479 (12): Directed teaching in physical education K-12

PROGRAM PROCESS

Field work includes beginning observation in the freshman year and teaching experiences in a block design (i.e., Tuesday and Thursday mornings) in the elementary, middle, and high schools. Student teaching is a full semester experience split equally into an elementary and middle/high school assignment.

UNIQUE PROGRAM CHARACTERISTICS

All students take a beginning generic course in teaching. Students learn about teaching skills from an open, closed, and concept perspective. Students learn about content development, management skills, feedback, and criteria for selecting learning experiences. A second course focuses on applying this information in the elementary school; students teach groups of children and concurrently take courses in child development and elementary school physical education. Students are held accountable for management time, percentage of activity (meaningful) time, content development, and for feedback through analysis of tapes made of each of their lessons. A middle/high school class is the focus of the next course in which students start by teaching a half class and move into teaching a whole class. concurrently, students take an advanced course in teaching analysis in which a more formal analysis of teaching (APT, ALT-PE, OSCD, and self-designed instruments) is entertained. During student teaching, students also take a course in curriculum designed to give a K-12 perspective.

FACULTY SIZE, CHARACTERISTICS, TYPICAL ASSIGNMENTS

There are 18 full-time faculty in the Department of Physical Education. Six faculty contribute and are actively engaged in teaching or research in instruction and curriculum.

RESEARCH

Faculty are actively encouraged to pursue field-based research on teaching in the public schools. Two most recent studies—Differential Effects of Three Teachers on a Middle School Volleyball Unit and Effects of Teacher Intervention on Jumping and Landing Patterns of Second Grade children—were presented at the Olympic Scientific Congress in Oregon, July, 1984.

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Dual Certification Program Elementary Education—Elementary Physical Education

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Located in the heart of the Dallas-Fort Worth metroplex, one of the fastest growing areas in the nation, the University of Texas at Arlington (UTA) reflects that growth on a modern 342-acre campus in downtown Arlington. It is presently the academic home of almost 24,000 students and is enjoying a steady increase in enrollment each year. About 400 of the students have chosen physical education as their major. UTA is basically a commuter campus with only 300 dormitory rooms on campus and no concentrated student housing area off campus. The majority of students are drawn from the almost 5,000,000 people who live within a 40-mile radius of the campus.

The Center for Professional Teacher Education (CPTE) offers elementary certification in fifteen teaching areas, all-level certification in four teaching areas, and secondary certification in twenty-eight areas. The CPTE does not have the authority to grant degrees—that is the exclusive responsibility of the department in the respective schools. The CPTE's sole responsibility is to ensure that students who desire to be teachers meet all the state certification requirements. Physical Education is one of the twelve departments in the College of Liberal Arts.

The dual major program requires 132 semester hours for graduation with a Bachelor of Arts degree and teacher certification. The credits are distributed among general university arts and science requirements (48), physical education (36), elementary education (30), related areas (12), and general electives (6). The thirty-six credits in physical education are grouped into three areas—core requirements, elementary physical education courses and electives in physical education. The core requirements include an introductory course, Motor Learning, Kinesiology, Exercise Physiology, Measurement, and a senior level projects course. The courses designed specifically for elementary level are Developmental Activities and Transitional Activities two-credit courses and a methods course that includes a practicum experience. The electives are chosen in consultation with an advisor. The students must also take a minimum of seven activity credits.

The elementary education requirements are sequenced so a student takes paired courses. Elementary School Curriculum and Growth and Development are the introductory courses followed by a semester of reading and language arts and a semester of mathematics and science with social studies. All of these courses include practicum experiences. Six hours of education electives are required before the final semester of student teaching.

Students are admitted to the physical education program as entering freshmen, and are accepted into the Center for Professional Teacher Education after completing 60 semester credits and successfully passing a basic skills test.

To be eligible for student teaching, a student must have earned a minimum 2.5 grade point average in the professional physical education courses, a minimum 2.5 grade point average in all education courses and no grade lower than a "C," and a minimum 2.0 grade point average in all English courses attempted. The student teaching experience for this dual certification program is fourteen weeks and encompasses the normal school day. A student is assigned to an elementary classroom setting and experiences all of the assignments and teaching duties of an elementary school teacher.

The relationship with the public schools is formalized into a body called the University of Texas at Arlington Local Cooperative Teacher Education Center. The cooperative membership includes faculty members from CPTE, representatives of nine school districts, and members of three professional teacher organizations. All practicum experiences, class visits, joint research efforts, and student teaching assignments are coordinated by the Cooperative. It has proved to be an excellent place to discuss and solve potential problems between UTA and the public schools.

Some of the unique features in this dual certification program are:

1. Strong preparation in an academic area. The in depth preparation in a specific academic area prepares a graduate to take a leadership role in that subject in an elementary school setting.

2. The Local Cooperative Teacher Education Center. This cooperative arrangement provides a systematic method of obtaining input from the publi schools being served by UTA.

3. Sequencing practical experiences in the final two years. Before starting the final practice teaching experience, each student has experienced a minimum of eighty-three hours in an elementary school.

4. A wide range of employment opportunities for a dual-certified teacher. The program provides the elementary classroom teacher the background to integrate and teach physical education as part of the total educational experiences for the students in the class. The teacher could also be employed as a physical education specialist for an elementary school. Another option would be for the teachers to exchange classes. For example, the physical education certified person could teach all of the primary classes in physical education and another primary teacher could conduct all of the music or art classes.

The Physical Education Department employs fifteen full-time faculty members who teach in the professional program. The eight men and seven women have earned degrees from ten different universities and are employed because of their expertise in specific curricular areas. The Teacher Education Center employs seven men and five women who have earned degrees from ten different universities. 27 faculty members provide the education foundation for the physical education teachers who graduate from UTA.

Appalachian State University— Elementary Concentration

Judith B. Carlson

Appalachian State University
Boone, NC

Located in the heart of the Blue Ridge of the Appalachian Mountains, close to the borders of Virginia and Tennessee, Appalachian State is a comprehensive university, offering 130 academic majors at the baccalaureate level and more than 70 academic majors at the master and intermediate levels.

DEMOGRAPHICS

Enrollment: 9,507 (Fall 1984).
Structure: ASU is organized into four Colleges. The Department of Health Education, Physical Education and Leisure Studies (HEPELS) is an academic unit of the College of Fine and Applied Arts. Within the Department of HEPELS there are five areas under the leadership of an area coordinator (Health Education, Leisure Studies, Physical Education, Driver and Traffic Safety Education, and the graduate program. The Physical Education area Coordinator is responsible for the Professional Program which contains the professional preparation for a K-12 NC Certification. Within the physical education major our students have the option of selecting either the elementary or the secondary concentration.

BACHELOR OF SCIENCE IN PHYSICAL EDUCATION

The Physical Education curriculum provides our students with a variety of career options and degree opportunities. A student may pursue a course of study leading to a B.S. in Physical Education, with or without certification in teaching; a minor in Physical Education; a minor in Athletic Training; a minor in Athletic Coaching (non-PE), or a minor in Dance. Those interested in teacher certification may select either a secondary school emphasis, or an elementary school emphasis.

The Physical Education curriculum is a strong academic program placing equal emphasis on both the sciences and the acquisition and teaching of motor skills.

PROGRAM CONTENT—ELEMENTARY CONCENTRATION

A major in physical education leading to a Bachelor of Science degree and teacher certification consists of 51 to 54 semester hours in addition to the general education requirements. As part of the general education requirements, students must select six semester hours of biology, chemistry, or physics, PE 1120 and 1121 as activity courses, History 1101 and 1102 and Math 1020 or higher. Core courses in the major include HEd 1105 or 3110, 3100, PE 1550 (Introduction to Physical Education) with a minimum grade of "C," 2.0, required for admission into the PE program), 1220 and 1221 (or 1320 and 1321 for the transfer student), 2000, 2010, 2020, 2556, 2560, 3510, 3550, 4000.

Students interested in teaching at the elementary school level select the elementary concentration which consists of the following courses:

PE 2556. The Child: Implications for elementary physical education—Three semester hours; offered each semester and summer. This is a prerequisite to all the other elementary concentration courses. The course focuses on children and how they learn in the context of movement experiences.

PE 3010. Games for children—Two semester hours. Offered every third semester. A study and application of the movement themes which provide the games content for elementary school physical education. One hour lecture and two hours lab.

PE 3020. Gymnastics for children—Two semester hours. Offered every third semester. A study and application of the movement themes which provide the gymnastics content for elementary school physical education. One hour lecture and two hours lab.

PE 3030. Dance for children—Two semester hours. Offered every third semester. A study and application of the movement themes which provide the dance content for elementary school physical education. One hour lecture and two hours lab.

PE 3560. The process of observing children in movement experiences—Two semester hours. Offered every third semester. A study and practical application of the tool of observation based on knowledge of the child, motor development, and movement content. Two hours lecture, one hour lab.

PE 4050. Determining teaching styles appropriate for elementary school physical education—Three semester hours. Offered every third semester. A study of the effective techniques of teaching, designing, and evaluating movement experiences for elementary school age children. Three hours lecture.

PE 4060. Developing a physical education curriculum for the elementary school child—Three semester hours. Offered every third semester. A study of the significance of physical education and its role in the school curriculum. Three hours lecture.

PE 3556. How children move: Implications for elementary education—Three semester hours. Offered every semester and summer. An overview of movement experiences in games, gymnastics, and dance focusing on the teaching of children K-8. Three hours lecture (for non-PE majors). A required course for the elementary education major.

PROGRAM PROCESS

The prerequisite course, PE 2556, is generally taken at the sophomore level. The other concentration courses are taken during junior and senior years.

Direct experience with children is afforded in each class with substantive required teaching and observing as an integral part of the experience. Children from a local community alternative school are brought to our campus. In exchange for our good fortune in having children with whom to work, we offer them a physical education program. Occasional experiences are afforded in the local K-8 school with direct teaching opportunities and observation as well as in several of the pre-school centers.

For those students in elementary concentration, careful consideration is given regarding their student teaching placement in order to assure a positive cooperative experience. The placement is handled in the College of Education, with recommendations made by the Coordinator of Elementary in Physical Education.

FACULTY

Because the elementary concentration is new (in its third year of implementation), one faculty member is solely responsible. This limits the perspective, but does not preclude the possibility of adding faculty as the program expands and the need arises.

SUMMARY

As physical educators at Appalachian State University, we have made a commitment to elementary school physical education. We recognize the importance of quality education and want our students to be knowledgeable, understanding, and able to represent this vision of quality as they face the challenges of a career. We believe that preparation of the young for present and future effectiveness and self-realization in a free society has been the general goal of American education. We try to achieve this goal by offering an individualized approach.

West Virginia University Teacher Certification Program for Grades K-12

Andrew Hawkins

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West Virginia University (WVU) is the major land grant university and the only doctoral degree granting institution in West Virginia. The enrollment approximates 21,000, including 7,000 graduate students in 15 schools and colleges.

The Teacher Certification Program in Physical Education at WVU is part of the School of Physical Education and is directly administered by the Department of Professional Physical Education using approximately 9-10 FTE faculty. The department has instituted policies which likely will decrease enrollment to around 200, including the establishment of a pre-physical education major with admittance to the teacher certification program being competitively determined.

PROGRAM FACETS

The several program facets in which students are engaged may be categorized as follows: 1) General Education; 2) Educational Theory Core; 3) Second Teaching Field; 4) Physical Education Foundations and Electives; and 5) Physical Education—Teacher Education Core. The Education Theory Core consists of an Introduction to Education course, two courses in Human Development and Learning, and courses in Reading in the Content Area and Secondary School Health. The Physical Education Foundations courses include introduction to Physical Education, Sociology and Psychology of Sport, Sport Injury Control and Management, Kinesiology, and Exercise Physiology.

The Physical Education—Teacher Education Core

The Physical Education—Teacher Education core reveals the program's uniqueness. The courses have been designed on the conceptual assumption that the overriding purpose of physical education is to enhance the motor development process. Motor development is defined as the way in which individuals acquire motor skill as a function of age. Hence, the role of the physical educator is to facilitate the skill development process in age appropriate motor activity.

The 43-hour program which has emerged from this conceptual framework has been logically organized around three competency areas necessary in order for the physical educator to fulfill this role effectively: 1) knowledge of the motor development needs of the pupil population, 2) knowledge and skill in the activities (curriculum) which have the potential of meeting those needs, and 3) knowledge and skill in the implementation of those activities (methodology) in ways that will maximize the possibility of meeting those needs. These competency areas essentially form three interdependent instructional foci: 1) the "needs" focus, 2) the "curriculum" focus, and 3) the "methodological" focus.

The motor development needs focus includes two largely informational courses: Motor Learning and Development provides information on the motor development characteristics of normal individuals through the life span, and Motor Development for Special Populations provides similar information for categorical handicapped groups. The curriculum focus includes two classes for elementary certification, Early Childhood Activities and Middle Childhood Activities, and at least four classes in the traditional sport skills activities sequence for secondary certification (three activities per class).

The methodological focus includes three classes plus student teaching and is clearly unique in its approach. The Instructional Systems course provides students with competencies necessary to implement individualized mainstreamed classes using diagnostic-prescriptive techniques. The Generic Teaching Skills course focuses on teacher and student behaviors and their relationship to teaching effectiveness. Both classes involve extensive field based training utilizing cooperative public school placements. The practicum portion of the Motor Development for Special Populations class provides field-based opportunities to implement instructional systems competencies and teaching skills with categorical and non-categorical handicapped groups. Student teaching typically involves elementary and secondary placements. All practica in the methodology focus have, as a common denominator, a behavioral-data-based evaluation system designed specifically for the program for providing instructional feedback to prospective teachers and for providing more valid program evaluation data. The result is a conceptually sound program that includes the field-based training and data-based feedback necessary to have an impact on the quality of the graduates.

FACTORS INFLUENCING THE PROGRAM'S EFFECTIVENESS

In retrospect, it seems there may have been several factors that have shaped the development of the program we provide. A lack of entrenched tradition essentially provided a relative vacuum, ripe to be filled with innovative ideas. Similarly, there was a conspicuous lack of negative socialization of the youthful faculty (nine of 12 are under 36). The school and department heads have been particularly supportive, due ostensibly to their conceptual agreement, but no doubt associated with their willing receipt of a sizeable sum from the U.S. Office of Special Education (whose support was predicated by substantive curriculum changes). The Office of Special Education primarily supports much of the field-based training and program evaluation.

The Department of Professional Physical Education has attempted to establish a relatively small, high quality teacher education program based on a strong, coherent conceptual framework. The intent has always been to remain true to the conceptual underpinnings in determining course content and simultaneously to implement the content in ways that will maximize the effect of the program according to the state-of-the-art in teacher education research.